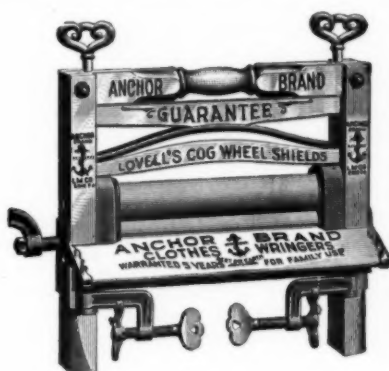


AMERICAN ARTISAN and Hardware Record

Vol. 82. No. 15.

620 SOUTH MICHIGAN AVENUE, CHICAGO, OCTOBER 8, 1921.

\$2.00 Per Year.



Anchor Brand Clothes Wringers

LOVELL was the first patentee and manufacturer of a satisfactory *Ball Bearing Wringer*. Our ball bearing wringers are now the most perfect and smoothest running on the market. Lovell introduced the *Safety Cog Wheel Shield* and improved the rubber rolls so they would contain the desired elasticity with the best wearing qualities.

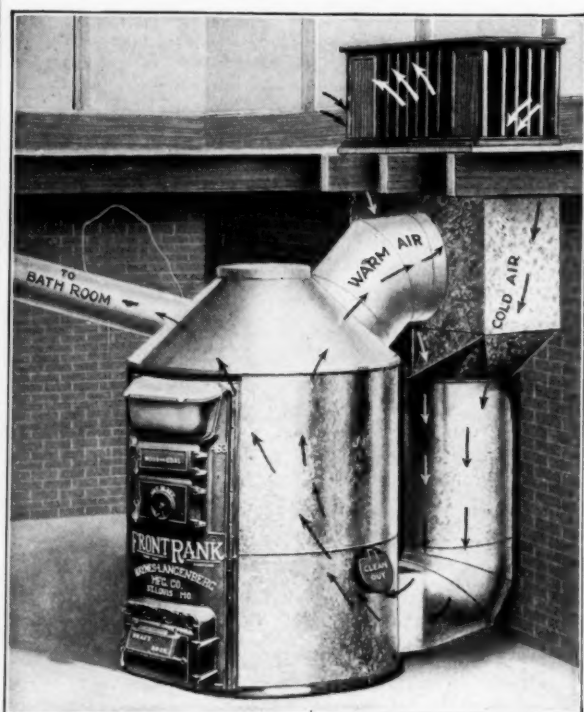
So you can't go wrong when you sell Anchor Brand Clothes Wringers to your

friends. Other makes have good features—but see if Lovell hasn't got them and if Lovell didn't have them first. We specialize on satisfaction—Lovell Anchor Brand Clothes Wringers are guaranteed and they can be had in many sizes, types, and finishes. Put them in stock now and attach them to your washing machines. Let us have your name and address so we will be sure to send you our latest price list and illustrated catalog.

Lovell Manufacturing Company
Erie, Pa.

Largest Manufacturers of Clothes Wringers in the World





A FRONTRANK[®]

TRADE NAME REGISTERED

COMBINATION OF BEAUTY AND UTILITY

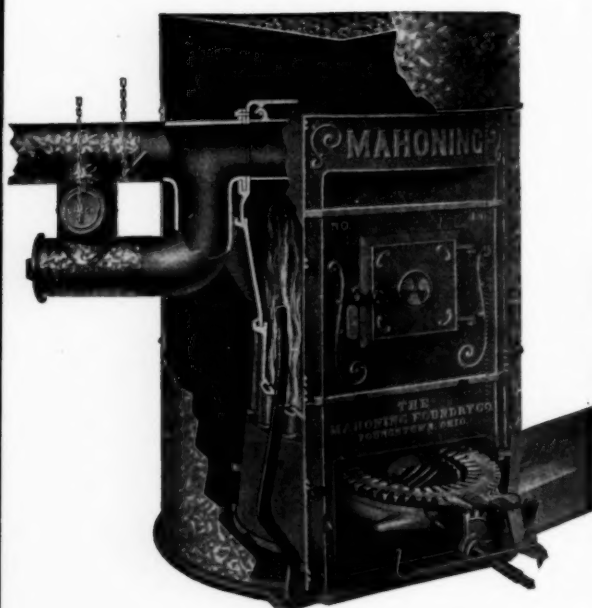
Furnacemen will find this combination simple and easy to sell and install, as well as a most efficient heater, very pleasing to the owner.

WRITE TODAY

If desired, we will gladly plan every installation for you.

HAYNES-LANGENBERG MFG. CO.
4058 FOREST PARK BOULEVARD
ST. LOUIS, MO.

THE JOB OF HEATING AN ENTIRE CITY



MAC DONALD, OHIO, in the heart of the steel industry, ordered 204 Mahoning (pipe) furnaces.—Newton Falls, Ohio, required 150 Wright (pipe) furnaces—Elwood City, Pa., took 200 Mahonings (pipe) and wanted more—Beach Bottom, W. Va., installed 125 Wrights (pipeless)—Harmersville, Pa., used 176 Wrights (pipeless). Farrell, Pa., and Midland, Pa., each ordered 100 Mahonings in pipe and pipeless.

MAHONING and WRIGHT FURNACES IN TWO TYPES

Mahoning and Wright furnaces are built in pipe and pipeless types. The fact that the heaters are foremost in great housing projects is significant to dealers who want to represent a guaranteed line that makes good on performance.

Write today for complete agency details, literature and price list

THE MAHONING FOUNDRY CO.
622 POLAND AVE. YOUNGSTOWN, OHIO

FOUNDED 1880
BY
DANIEL STERN
Thoroughly Covers
The Hardware, Stove,
Sheet Metal, and Warm
Air Heating and Ventila-
ting Interests

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WHAT IS THE REALLY BIG IDEA OF YOUR PARTICULAR BUSINESS?

Some coiner of slang phrases sprung a good one when he conceived the sentence composed of the first five words of the heading of this editorial: "What is the big idea?"

He may have meant to be sarcastic, or maybe he was really wondering what his "partner" had in mind that caused him to be so enthusiastic.

Enthusiasm is a good thing in business. Without enthusiasm no business ever grows away from its swaddling clothes.

You can not instill enthusiasm for your business into those whom you want to become your customers, unless first of all YOU are enthused about your business.

In the second place, your employees must have some of your enthusiasm infused into their minds, or else they will work like automations you see behind the counters of so many department stores.

But what is there to be enthusiastic about your business, outside of the fact through it you may make a living and a bit of profit besides?

If you are a hardware dealer just because there is money in selling tools, kitchen utensils, electrical supplies, heating and cooking stoves, washing machines, etc., and not because you feel that by operating your store you are rendering a specific service—then you are not likely to instill very much enthusiasm among your salespeople and other employees, nor are the people in your trading territory likely to become very enthusiastic about you, or your store, or your goods, or your prices.

What then is the big idea of your business?

R. A. Chandler operates a hardware store

in Sylvania, Ohio—not a big city.

He has the right idea and he is enthusiastic about his store and about his goods.

His employees are enthusiastic about his business—about "their" business—they feel that they are a part of it—they feel that by working under his direction they are helping to make life easier and more pleasant for people who buy from the Chandler Hardware Company.

What is there about your business policy, your way of doing business that you can grow really enthusiastic over; that will make your employees feel as they must feel if they are to be worth much to you in the upbuilding of your business?

Ask Robert E. Nicholas, of the Nicholas Hardware Company, Oak Park, one of the Western suburbs of Chicago what he thinks about his business.

He will tell you that he has the finest and best assorted stock of hardware and kindred lines in any of the suburbs of Chicago—and it is true.

He will tell you that he can fill any order for anything classed as "Hardware" better and quicker than any other store similarly situated and better than almost any store in Chicago—and it is true.

That is the big idea of his store.

What is the big idea of your business?

When you get this question answered in your own mind—

Then you will also have discovered the most effective and strongest basis for appeal to your prospective customers.

And then your business will commence to grow at a really satisfactory rate.

Random Notes and Sketches

By Sidney Arnold

We all enjoy the discomfiture of the pompous, self-made man who bores everybody with his solemn platitudes, says D. E. Cummings of the Chicago office of Thatcher Furnace Company. That is why he passes along this clipping:

"Here, boy," said the wealthy motorist, "I want some gasoline, and get a move on! You will never do anything in this world unless you push. Push is essential. When I was young I pushed, and that was what got me where I am."

"Well, gov'nor," said the boy, "I reckon you'll have to push again, 'cause we ain't got a drop of gas in the place!"

* * *

You can save doctor bills and find out if your liver is in good order or not by reading the following tale and observing whether or not it makes you smile. This infallible test is proposed by Allan J. Coleman, ex-president of the Hardware Club of Chicago:

A doctor, attending an old gentleman, had instructed the butler in the art of taking and recording his master's temperature.

One morning on arriving at the house the doctor ran into the butler.

"I hope," said he, "that your master's temperature is no higher."

"I was just hoping that myself, sir," said the butler solemnly. "You see, he died an hour or two ago."

* * *

Some of the boarding houses of Indianapolis refuse to take children, says E. W. Norman of that city, President Indiana Jobbers and Salesman's Auxiliary. The reason is contained in this story which he sends me:

Little Jenny, the eldest of seven, was reading the newspaper. Presently she looked up and asked her mother:

"Mother, why do all these advertisements of boarding-houses say that no children will be taken?"

Mother replied wearily: "I can't hear a word you say. Go and see what baby is crying for, and tell Johnny not to shoot peas at people in the street, and make George and Kate stop fighting, and tell Dick if he goes on banging that drum so hard, I'll take it from him. What did you ask me? No; I never can understand why boarding-houses refuse to take children."

* * *

Some people think the Government owes them a living, declares Arthur J. Pence, sales manager Copper-clad Malleable Range Company, St. Louis, Missouri. They remind him of the ragged old negro, carrying a basket, who accosted President Harding as he was leaving the executive mansion.

"Am you de President, sah?"

"Yes," said Mr. Harding, "what can I do for you?"

"Well, you see, Mistah Harding, I'se from Virginia, an' I'se a mighty poor man. I hear dat dere is some pervisions in de Constitution for de cullud man, an' I'se here to get some ob dem, sah."

A lawyer friend of Palmer Holmes, manager Lallance & Grosjean Manufacturing Company, Chicago, Illinois, was consulted by some girl acquaintances and asked to suggest a name for their club. It was to be, they said, for the building of character. Also no men were to be admitted even as guests. They had no use for men.

Whereupon the lawyer suggested the Building and Lone Association.

* * *

Soon after the motor ordinance went into effect in his home town, says George H. Dietz of Lincoln, Nebraska, secretary Nebraska Retail Hardware Association, a motor cop hailed a lady driving a limousine on the boulevard and ordered her to report at 9 o'clock.

"The very idea, why?" exclaimed the lady.

"I'm sorry, ma'am," insisted the bluecoat, "you were going 40 miles an hour."

"Impossible," exclaimed the lady indignantly, "why I havent been out an hour yet."

The cop said it was a new one on him and marked it off his tab.

* * *

I am sure that all my readers will smile with amusement when they read the following story narrated by Samuel D. Latty of the Kirk-Latty Manufacturing Company, Cleveland, Ohio:

"Mamma, I lost my gum," cried little Harold.

"Hush, darling," she cut him off, then smiled apologetically at her guests.

"Mamma, I lost—"

This time the mother, smiling vacantly over her portion of the chop suey lunch, effectively stopped Harold with a sharp pinch of his leg under the table.

When the guests had gone Harold pouted the explanation:

"All I wanted to tell you mamma, was that I'd lost my gum in your chop suey, but you wouldn't let me finish."

* * *

In Detroit life is lived intensely at times, says William D. Biggers of the Continental Company, Detroit, Michigan. As proof he submits this dialogue:

He—Why are you so sad, darling?

She—I was just thinking this is the last evening we can be together until tomorrow.

* * *

Just a Tip.

There isn't much in this old world
But sunshine, after all;
The smiles and tears, the hopes and fears,
The wormwood and the gall
Are all mixed up, and when I come
To analyze the whole
I find the sunshine dominates
My heart and broncho soul.

Ye grouchy pessimist whose eyes
Reach not the skies of blue,
Join eyes with mine, where God's sunshine
Will meet your lengthened view.
Then let your face reflect it back
In smiles of sweet content,
And shame should roll athwart your soul
For all the growls you've spent.

—Capt. Jack Crawford.

Your Kitchen Range Window Displays Can Be Made To Talk Sales to Passers-By.

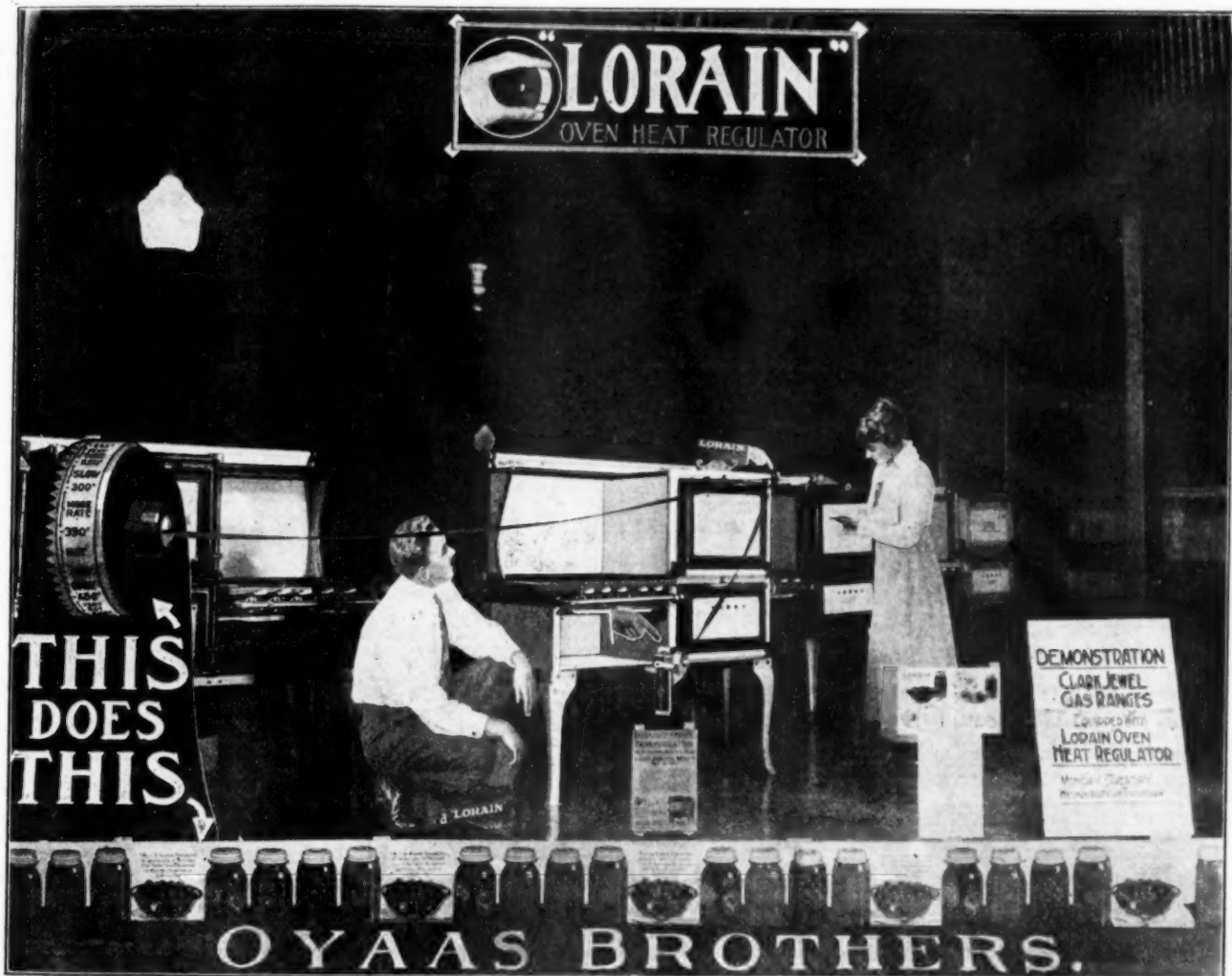
Real Selling Arguments Presented in Window Displays Always Increase Attractiveness and Force.

In the old days a window display of stoves was usually a pretty dead looking affair. It called attention to the fact the store sold stoves, but in most cases very little real selling force was put into the arrangement.

Today we do things differently, and hardware dealers that make a feature of stoves and ranges give much time and attention toward planning window displays

esting sample of good window display advertising:

"We put four Clark Jewel cabinet ranges in the window. On the left of the center range we placed the figure of a man looking up at the range. A sign at his feet says—'It's a Lorain.' On the right of the stove we put a woman. Near her is a sign—this placard is so black in the photo that it can hardly be seen—reading—'That's just what I wanted.'"



Real Selling Window Display of Clark Jewel Gas Ranges. Arranged by Martin T. Oyaas of Oyaas Brothers, Superior, Wisconsin.

of this line in a manner which will not only tell the passer-by that he can buy a kitchen range in the particular store, but which will cause him to stop and see what kind of range; why that particular range is just the one for which he has been looking to make his "better half" happy when she is cooking his dinner, or canning the fruit that he likes to have during the winter, or baking the bread which he prefers to the baker's loaf.

In the accompanying illustration we show a window display arranged by Martin J. Oyaas for Oyaas Brothers, Superior, Wisconsin.

Mr. Oyaas writes as follows about this very inter-

"The figures originally came with a pottery display, and we simply adapted them for our Lorain window. The hand on top of the range was cut out of a show card we happened to have. On this we pasted a Lorain card which read—'Lorain Oven Heat Regulator.' On the window pane we pasted a cut-out of a hand pointing to a picture of a regulator. From this regulator on the window we stretched a red ribbon to the regulator on the range, and to the big lithographed poster on the left side of the window, following the instructions that came with the Lorain display material.

"We also put two Lorain Oven Canning Circulars on

the pane to give the idea of service.

"We feel that this was an original window trim, and goes to show what can be done by dealers if they save all the advertising material they receive. Needless to say, the window attracted considerable attention—it got results."

The Sell Company, Canton, Ohio, had a window display arranged during the Spring Exhibition of Fashions this year which resulted directly in sales of \$2,198.00 worth of the merchandise shown, in ten days.

merchandise. Starting with a foundation of Nairn Linoleum, I put in a Hoosier Cabinet, Standard Sink, Leonard Cleanable Refrigerator, American Stove Company Stove, and a Big Ben Alarm.

"From the grocery, I borrowed Aunt Jemima Pancake Flour, Quaker Rolled Oats, Domino Sugar, Royal Baking Powder, None-such Mince Meat, Cream of Wheat, Karo Syrup, and Ivory Soap.

"I left this window in for ten days, and during that time there was always a crowd in front of it. Its success may be judged from the fact that sales of

Read These Letters from People Who Know

A great labor saver, a great worry saver—what all her friends could have one.

Greeley Gas & Fuel Co.

Gentlemen:—I regard the 'Lorain' Oven Heat Regulator as my Clark Jewel Range as one of the greatest conveniences of my kitchen. It is a great labor saver and a great worry saver. I wish all my friends could have one.

Mrs. B. L. Smith, 1817 13th Ave.

Could any more be said for an appliance of any kind than Mrs. Burns has said in this letter?

Greeley Gas & Fuel Co.

I am pleased to say that the Clark Jewel range equipped with the 'Lorain' Oven Heat Regulator is all that more than I claimed for it, as the longer I use mine, the more new advantages I find in its service. It is a perfect labor saver and it will cook your meals perfectly while you are attending other duties. It is an economy, a labor saver and an ornament to any kitchen. It is always in order and ready for service at any time.

Mrs. T. J. Burns, 1717 13th Ave.

P. S.—After installing the 'Lorain' I have had no burned meals and no 'freaky' ones.

Can you put an angel food cake in your oven, go down town and find it perfectly baked on your return?

Greeley Gas & Fuel Co.

Dear Sir:—It is indeed a pleasure to write a word of commendation for an efficient and helpful appliance as the 'Lorain' Oven Heat Regulator. I have found it useful in every respect and a great labor saver. In fact, I have found it especially useful in baking Angel food cakes. The 'Lorain' is a perfect labor saver and it will cook your meals perfectly while you are attending other duties. It is an economy, a labor saver and an ornament to any kitchen. It is always in order and ready for service at any time.

Mrs. Charles B. Smith, 1335 5th Ave.

Are you skeptical about any of the claims made for the 'Lorain'? Let us convince you, as we have others.

Greeley Gas & Fuel Co., Greeley, Colo.

Gentlemen:—My 'Lorain' was one of the first to be installed in Greeley and I find that it has been a great labor saver and a great worry saver. I wish all my friends could have one. It is a perfect labor saver and it will cook your meals perfectly while you are attending other duties. It is an economy, a labor saver and an ornament to any kitchen. It is always in order and ready for service at any time.

Mrs. J. A. Phelps, 1714 11th Ave.

Mrs. Ewing was one of the first purchasers of the 'Lorain'. She is now unwilling to be without it. Her only objection to gas cooking overcomes.

Greeley Gas & Fuel Co., Greeley.

Gentlemen:—Having used a 'Lorain' equipped gas range for more than a year, I take pleasure in stating that I would be unwilling to be without it. The attachment has proved satisfactory in every way.

As stated in the advertisement the stove may be set at a heat whereby one may put into the oven whatever one desires to use for the evening meal, and light the gas in the early afternoon and leave the whole thing with perfect assurance that the cooking will be properly done, with nothing burned or overdone at dinner time. On the other hand one can cook as fast as a full load will accommodate by an other adjustment.

If I ever had any complaint with gas cooking it was that a gas oven constantly got hotter and hotter, not so with the 'Lorain', the oven stays at the heat you desire and does not burn, and there is no danger of burning or overbaking.

Very truly yours,
Mrs. Frank I. Ewing, 1325 10th Ave.

LORAIN Oven Heat Regulator

Every 'Lorain' user is glad of the opportunity to tell of its wonderful qualities and to recommend it to her friends.

Do you stir up an angel food cake in ten minutes or less and put it in the oven with never a worry as to its outcome? Mrs. Rasmussen owned the first 'Lorain' in Greeley.

Gentlemen:—I am pleased to tell you what I thought of my 'Lorain' Oven Heat Regulator. I have found it useful in every respect and a great labor saver. In fact, I have found it especially useful in baking Angel food cakes. The 'Lorain' is a perfect labor saver and it will cook your meals perfectly while you are attending other duties. It is an economy, a labor saver and an ornament to any kitchen. It is always in order and ready for service at any time.

Mrs. W. J. Rasmussen, 1841 13th Ave.

At least one of your neighbors has a 'Lorain' in her kitchen. Ask her about it or come in and let us explain its operation.

Clark Jewel Ranges Are Lorain Equipped

Have you ever been disappointed in baking results? Get a 'Lorain' and you need never be again.

Greeley Gas & Fuel Co.

Gentlemen:—I have never had an appliance of any kind which has given me so much pleasure and satisfaction as my 'Lorain'. I know exactly what my results will be and am never disappointed. I always have my entire dinner in the oven on Sunday mornings when I go to church and am relieved of all worry and bother. In addition to all its helpful points the range itself is so easy to keep clean that I am relieved of that really unpleasant task. I have never been able to say enough in praise of the range.

Very truly,
Mrs. Z. B. Wicker, 1325 13th Ave.

Often leaves the house or goes about other work with no thought of the next meal—her 'Lorain' takes care of that.

Greeley Gas & Fuel Co.

Dear Sir:—I have used the 'Lorain' Oven Heat Regulator for more than seven months. I have found it satisfactory and an excellent labor saver. It is a real labor saving device as well as a gas saver. I put my whole dinner in the oven and set the regulator at a certain heat which is according to the length of time desired. It often leaves the house or goes about other duties with little thought of the next meal because I know it will be ready to serve at meal time. The 'Lorain' is a great pleasure in baking day. I know the exact temperature of my oven. There is no guess work.

Very truly,
Mrs. John P. Green, 1325 13th Ave.

Mrs. Farley would not part with her 'Lorain' if she could not get another one.

Greeley Gas & Fuel Co.

Gentlemen:—In speaking of the 'Lorain' Oven Heat Regulator I wish to say that it is a very great advantage to be able to regulate the oven heat and eliminate the guess work. I have always felt very proud of my angel food cakes and have baked a great many but I can frankly say that I have never obtained the results I am now obtaining with my 'Lorain'. In baking cookies I set the regulator at the temperature desired and when they are baked out I know that I could not get another. I would never part with my 'Lorain'.

Very truly,
Mrs. C. A. Farley, 1325 13th Ave.

Mrs. Palmer owned the second 'Lorain' equipped range in Greeley and has had plenty of time to test its helpful qualities.

Greeley Gas & Fuel Co.

Gentlemen:—I am glad to add my word of praise for your Clark Jewel range with the 'Lorain' Oven Heat Regulator. It has proved to be all that was claimed for it. A great labor saver and has done away with all the 'worry' of baking day. It is particularly helpful in cooking foods which require several hours, roasts, baked beans and so forth as the articles may be placed in the oven and left without watching constantly.

Mrs. P. S. Palmer, 1325 14th Ave.

One easy turn of the 'Lorain' oven heat regulator wheel places at your command all measured and controlled oven temperatures.

Mrs. Sherman has used Clark Jewel ranges exclusively for fourteen years and was one of the first to purchase the 'Lorain'. We consider her endorsement of exceptional value.

It is with pleasure I heartily recommend the Clark Jewel gas range and especially since they have installed the 'Lorain' Oven Heat Regulator. While it may not do all the work of a pressure cooker, it fills the bill in every way. If I want to be done a few hours before dinner, I simply put my meal in the oven, roast or any kind of meat, potatoes and vegetables all in covered dishes, set the 'Lorain' regulator, go and be happy. When I return the dinner is cooked to perfection. I have used one over a year and am perfectly satisfied with it.

Mrs. J. C. Sherman, 1333 11th Ave.

Has never had an unlucky baking day. Cooks meat for fourteen people while at church. We have always contended that gas was more economical than coal. Read what Mrs. Dampewell has to say.

Greeley Gas & Fuel Co.

Gentlemen:—I have used one of your 'Lorain' Oven Heat Regulators for nearly a year and feel glad of the opportunity to tell you how much I have enjoyed using it. I have baked every week and have never had an unlucky baking day. I have the same results with roasts and all other kinds of baking. One Sunday morning I placed a dinner for fourteen people in my oven, just before starting to church. When I came home I had only to make coffee and serve the meal and I took it from the oven.

We have also found by actual experiment that we can cook much cheaper with gas than with coal, but even if this were not true I could never think of going back to the coal stove after using my 'Lorain'.

Very truly,
Mrs. R. Dampewell, 1324 7th Ave.

Read what Mrs. Day has to say of her 'Lorain'. Up you blame us for feeling rather proud of it?

Greeley Gas & Fuel Co.

Dear Sir:—I have been using my new Clark Jewel range with the 'Lorain' Oven Heat Regulator and I can not express my appreciation for it. Baking is so much more of a pleasure and the results are so wonderful that I can heartily recommend it to you.

Mrs. Marie Day, 1405 12th Ave.

We have solved the "domestic help problem" for many just as we have for Mrs. Slatley. Why not for you?

Greeley Gas & Fuel Co.

Gentlemen:—You surely solved the domestic help problem in our home when you told us of the 'Lorain' Oven Heat Regulator in connection with the Clark Jewel. I enjoy placing the entire meal in the oven, setting the temperature wheel, and forgetting it while I go to the movies or to club. Always on returning home, I find my dinner perfectly cooked and ready to serve.

The certainty of its being "just right" is also gratifying and by placing the entire meal in the oven, the amount of the work is much less.

Very truly,
Mrs. Roy Slatley, 1345 15th Ave.

We feel that this is a particularly strong recommendation and call your attention to the unimpaired in heavy type.

Greeley Gas & Fuel Co., City.

Gentlemen:—In regard to our new gas range equipped with the 'Lorain' Oven Heat Regulator, let me say that we have found the range very satisfactory and are very delighted with the regulator. In the year we have used the stove, we have not discovered the possibility of the oven as we had expected, owing to the fact that we are compelled to use a coal range for hot water in our bathroom and therefore have utilized that heat for much of our baking. In the winter time we are forced to use the coal range for heating our kitchen. We use the gas very little during the cold months. However, when we have used the regulator we have found it all that was claimed for it. We have found it most satisfactory in maintaining a long slow fire for roasts. We set our regulator and put our roasts in and go off and have no more worry about whether it will be cooked or overcooked when we return several hours later.

While my water was in the hospital last spring and I was working down town all the time, I would have my meals home at noon, put it with potatoes, etc., in the oven and when I returned at 5:30 in the evening my dinner was ready.

During cold seasons we certainly enjoyed our stove because it roasts duck beautifully, and without any anxiety as to whether they would be over done or under done.

I am sorry that surrounding conditions have made it impossible for us to try out all the special features of this stove, but we are looking forward to the time when we shall be able to use gas as we wish.

Sincerely yours,
Mrs. R. D. Baird, 1319 14th Ave.

Mrs. Laughlin has been so well pleased with her 'Lorain' that she has never been able to say enough in its praise and never misses an opportunity to recommend it to her friends.

Greeley Gas & Fuel Co.

Gentlemen:—After having your gas range with a 'Lorain' Oven Heat Regulator in my home for over a year I am entirely convinced that it is a wonderful machine. I might say also that I feel it is as much an improvement over the ordinary stove as the electric iron is over the flat iron our grandmothers used. I am glad to recommend your ranges to anyone and everyone.

Very truly,
Mrs. Roy Laughlin, 1419 14th Ave.

Mrs. Carson says she does not know how she ever got along without her 'Lorain'.

Greeley Gas & Fuel Co.

Gentlemen:—After a year's experience with the 'Lorain' Oven Heat Regulator, I find that it more than lives up to its promise. The cheaper rate of meat can be cooked as tender as the choice, and the cost of the gas consumed is trifling. I prepare my meal plan in the oven, and after setting the regulator at the required number of degrees, it needs no more attention until serving time.

The 'Lorain' is economical and saves the kitchen work, allowing more time for recreation. I don't see how I ever got along without it.

Very truly,
Mrs. E. L. Carson, 1149 12th Ave.

Mrs. Waggoner feels that no improvement could be made on 'Lorain' cooking.

Greeley Gas & Fuel Co.

Gentlemen:—I am more than glad to say a word of praise for my 'Lorain' Oven Heat Regulator. It has been a pleasure to bake with it and the results are exceptional to say the least. My angel food cakes are always perfectly baked and there is never any question about them being just the same every time. This is of course true of everything. The 'Lorain' is a great satisfaction to be sure of your results, it is a real pleasure to be able to put things in the oven and leave them without watching. I feel that there can be no improvement on 'Lorain' and cannot say too much for it.

Very truly,
Mrs. D. F. Waggoner, 1335 11th Ave.

This Advertisement Tells People of Greeley, Colorado, What Their Neighbors Think of Clark-Jewel Gas Ranges and Lorain Oven Heat Regulators.

F. J. Held, who planned this window display, has the following to say about it:

"The window that draws the crowd and makes sales is the one made up of nationally-advertised articles. They attract attention quicker than unknown goods of the same class, and they add prestige to the store that handles them.

"In creating this window, my idea was to make it a real kitchen—so natural that women would recognize it and feel that it was true to life. So I even put in groceries—the ones women are familiar with and recognize as standard.

"Everything in this trim is nationally known, branded

displayed goods that we carry totaled \$2,198.00.

"The second biggest item in the list was Lorain equipped stoves, which brought in \$780.00.

"My total expense was \$6.80 for wall paper and the perishable groceries.

"\$2,200.00 is a good return on an investment of \$6.80, and it was due to a natural, life-like trim, plus the drawing power of nationally-known goods."

Does it pay to spend a bit of time in planning a real "selling" window display?

Did you ever stop to consider why a certain chain of white front restaurants catering to popular trade always has a man in white baking "flap jacks" in the

window in full view of the public?

Did your mouth ever water when you stopped to gaze through the front window of a "rotisserie" at the revolving roaster on which a fine looking ham or turkey or chicken was being cooked?

That is why "live" window displays always draw a crowd.

That is also why passers-by are changed into real customers.

Here is another notion:

Did you ever stop to consider how often your action is influenced by the judgment of others—by their statement of satisfaction?

For example, when you attend your state convention, how often do you ask your fellow hardware merchants what their experience has been with such-and-such a line?

More often than you think, no doubt.

Your customers are built just like you.

They think and act from the same impulses as govern you in purchasing.

So when you are selling kitchen ranges, or anything else, it is always good policy to refer them to some of their neighbors who have bought your kind of range and who have signified their satisfaction.

And, of course, you have a list of such names.

If you haven't collected such a list, get busy and get it.

The Greeley Gas and Fuel Company, Greeley, Colorado, sells Clark-Jewel gas ranges with the Lorain Oven Heat Regulator attachment and has a big list of satisfied users.

They make good use of this list and some time ago published an advertisement, seven columns wide and fourteen inches deep, in the *Tribune-Republican* of that city in which a considerable number of letters of recommendation were quoted—all of them, of course, to the effect that they were highly pleased with their Clark-Jewel range, and especially with the Lorain attachment.

This advertisement is reproduced herewith.

You can secure similar letters from your customers if you go about it in a diplomatic way.

And when it comes down to the real facts, there is nothing like a recommendation from a good cook as to the range you sell, for helping you in a sale.

Incidentally, if you have gas service in your community there is no reason why you should let the gas company sell the gas ranges.

On the contrary, there is every reason why you should sell most of the gas ranges used in your locality.

Ask Otto Godskeson, of the Godskeson Hardware Company, Clinton, Iowa, what he thinks about selling gas stoves in competition with public service corporation stores.

He knows that there is money in it for him to sell gas stoves.

You are as smart as he is.

Competition on that line is no harder in your town than in Clinton.

The remedy against bad times is to be patient with them.

Northern Michigan Hardware Men Have Meeting in Petoskey.

More than half a hundred retail hardware dealers, their wives and members of their sales forces gathered in The Braun Hotel, Petoskey, Michigan, Monday evening, September 28th, to exchange ideas and listen to discussions of business methods.

George W. McCabe, chairman of the Petoskey group, headed the committee in charge and was toastmaster of the evening. Other speakers included President Norman G. Popp, of the Michigan Retail Hardware Association, who came from his home in Saginaw; Secretary A. J. Scott, Marine City, and F. E. Strong, Bay City, who took charge of the question box.

Emmet, Charlevoix, Cheboygan, Alpena, Otsego, Montmorency and Presque Isle counties were represented.

The chief speaker of the evening was Samuel A. Davis of Cleveland, Ohio, who declared in opening his talk that this is the age of thinking in business and that the business machine requires brains in order that it may be successfully operated. "Success in business today is due largely to the quantity and quality of thinking we put into it," he told the hardware men. He answered the question of "How can I do more business?" with the question "How can I fit myself to do more business?"

The talk given by Mr. Davis was worthy of a large audience and was appropriate for retailers in every line of business. He not only talked to the dealer but devoted considerable time to the sales force members, giving them many pointers on how to make themselves of more value to the store in which they were employed.

Business men were urged to give more careful attention to the marking of goods. To be a success the store must show a profit and to show a profit goods must be properly marked. The speaker asked that there be more system in this department.

"The old story," he said, "was 'take a chance,' now it 'is take a profit.' Don't underestimate your overhead. You must figure your profit after your overhead has been added to the cost of your goods. Go over your stock thoroughly and often and find out which are fast movers and which are slow. Be good stock keepers."

The speaker cited the success of the five and ten cent stores as proof that these big dealers have mastered the science of the quick turn over and fast selling stock, as well as the value of the show window.

"Sell 'em from the street," the speaker urged in speaking of attractive show windows.

"Buy in small quantity," he told the dealers, "and regulate your deliveries. Keep your stock fresh, and learn to do business on the manufacturers' capital. Quality purchase usually slows up business."

Here are some of the other pointed pointers he left with his hearers:

"You must train your brain to show a gain. Save pain later by taking pains now. The old world turns all the time, and if you don't turn with it you will soon lose your turn.

"Go after the women. They are the natural shop-

pers. Go after the farmers and make them think they are the only people on earth. Go after the people just moving into your city or community.

"Do more constructive thinking and planning. If we want results now instead of regrets later we must do more thinking.

"The big, successful stores do not do these things because they are big, they are big because they follow this system.

"Establish daily sales quotas, pace setters for sales force members, suggest additional sales to each customer and have your clerk adopt the 'sell by suggestion' idea.

"The man who uses his head is the man who gets ahead."

To the members of sales forces present he left some valuable suggestions.

"Service is what counts. Be positive sellers, not the negative kind. Be diplomats not diplomuts. Sell by suggestion.

"Sell larger packages and help reduce the selling cost. Put larger thoughts into the minds of your customers.

"The words in your mouth are worth money to yourself and your employer. Be tactful. Make this a careful study. Your smile makes your store popular. There is a great deal in how you say 'Good morning.'

"Get the people's good will and you will get their money.

"The art in business is the heart in business. Make one friend a day. Be a dialogist, not a monologist. Know when to stop talking.

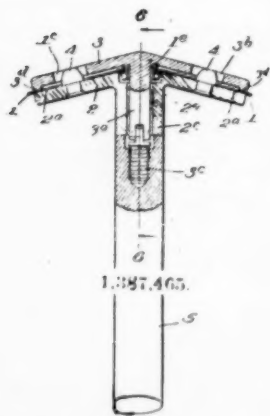
"Sell goods that won't come back to customers who will.

"If you make the store interesting to the firm, the firm will become interested in you.

"Business is a battle which must be won with good values, good advertising and service," he said, in concluding his talk. "Retail hardware stores of the future will be bigger and better, there will be fewer mistakes, more sales, fewer losses. The dealer will have a better standing in the community, because he will have a better understanding of his business."

Patent Rights Are Granted for Safety Razor.

Under number 1,387,465, United States patent rights have been granted to George Browning, Chicago, Illinois, assignor to Lee Razor Manufacturing Company, Chicago, Illinois, a Corporation of Delaware, for a safety razor illustrated and described herewith:



angle to each other.

Group of Illinois Hardware Dealers Attend Meeting.

Members of the Illinois Retail Hardware Association in the vicinity of Jacksonville, Illinois, gathered in the Dunlap Hotel of that city Wednesday evening, September 28th, for a dinner and program of business discussions.

G. E. Hackney, assistant editor of the National Hardware Bulletin, was the first speaker. He outlined the advantages that are derived from being a member of the national association, which is an amalgamation of the state associations.

H. R. Beatty, president of the state association, then took the floor, and gave an enlightening talk on the hardware dealers' attitude toward declining prices and reconstruction. He read an editorial that appeared in the New York Times, concerning a meeting of the New England Hardware Retailers.

The editorial made several sarcastic remarks about the dealers and accused them of profiteering and retarding the return to normalcy and prosperity.

Mr. Beatty then read a reply to the editor of the Times, written by Secretary Sheets, of the national association, stating the unjustness of the accusations, which were hasty and ill advised.

The president then gave the delegates an idea of the ability of each member of the state office and the great help they can be to the members of the association.

The principal speaker of the evening was then introduced, Captain Gorby, who has addressed many of the great industrial gatherings throughout the country and who is widely known for his ability.

He dwelt on the vast possibilities of these group meetings like this one and related incidents proving that conventions mean better business.

He told of business and industrial conditions throughout the state and was very optimistic in his report.

The gathering was then turned over to E. G. Aubrey, field representative of the state association, who answered any questions that the members cared to ask.

The following resolutions were voted by the meeting:

"Having in mind the charges that the press and public speakers have made against retailers alleging that they are blocking the return of prosperity by failing to pass on price declines promptly, we, the hardware dealers of Jacksonville district, in meeting assembled at Jacksonville, this 28th day of September, 1921, take this occasion to state our attitude and to say what our practice has been.

"We believe the return of normal business conditions depends largely on the lowering of prices of manufactured commodities, and that every factor having to do with the manufacturing and distribution of merchandise should reduce prices as rapidly as replacement values warrant.

"We have put into effect every price decline immediately as such declines have become known to us and have urged manufacturers and jobbers of the articles we handle to put down prices as fast as possible, and we shall continue to do these things."

Good Ideas for Window Display

*Practical Lessons from Exhibits in AMERICAN ARTISAN
AND HARDWARE RECORD Window Display Competition.
How to Get More Passers-By to Come into Your Store.*

WINDOW DISPLAY OF SPORTING GOODS INCREASES SALES.

There is something of the caveman even in the most diletante poet.

The super-refined lounge lizard of modern society, whose nerves are more delicate than those of a prima donna, feels some faint stirrings of primitive manhood in him when there is talk of hunting or when he looks at an exhibition of camping outfits.

The thrill of the hunt traces back through all stages of evolution.

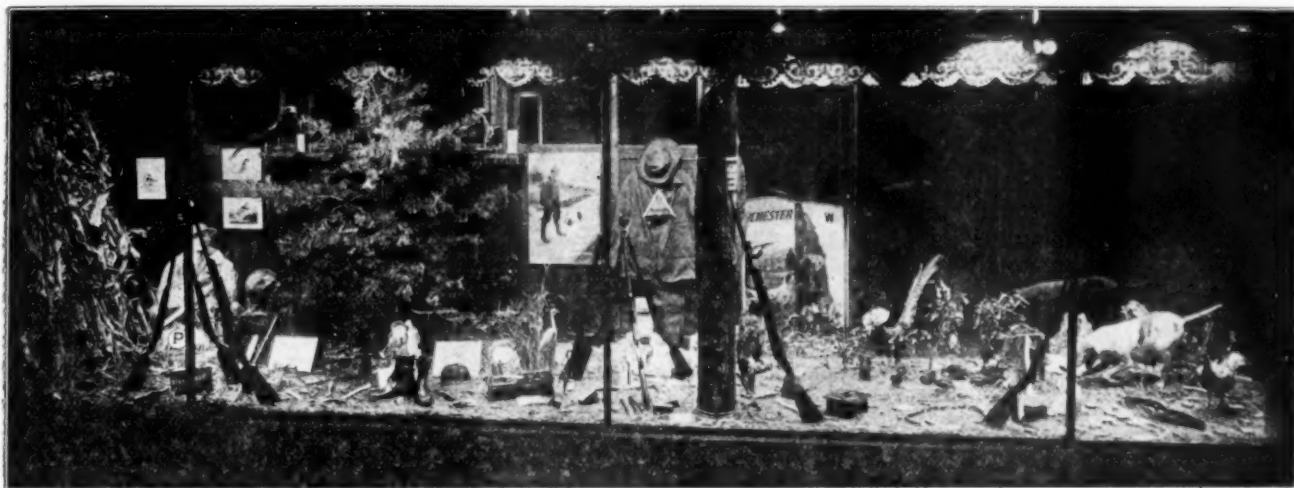
Although we have left far behind us the pioneer log cabin, the deep woods, and the wide open prairies of

used as convey in the quickest and most forceful manner the allurements of outdoor life.

These desirable effects are achieved by Mr. Sherk in the window display under discussion. He describes the exhibit as follows:

"This window is twenty-six feet long and five and one-half feet wide. The bottom is covered with grass. The background consists of advertisements of Winchester and Peters, and framed pictures showing native birds in natural colors, also 'Duxbak' hunting suit and hat.

"In the center is a pine tree, with a deer head showing through the branches. At the immediate right of trunk are squirrels and an English ring-neck pheasant,



Window Display of Sporting Goods and Camping Supplies, Designed and Put in Place by Harry H. Sherk for A. L. Sherk and Sons, Chambersburg, Pennsylvania.

Daniel Boone, the persuasion of these things is still in our blood.

In the midst of the refinements, comforts, and luxuries of the big city with its multiple mechanical conveniences, the call of the wild is never fully hushed.

It can be carried to the dulled ears of the city dweller through suggestiveness of such a window display as that shown in the accompanying illustration, which was designed and arranged by Harry H. Sherk for A. L. Sherk and Sons, Chambersburg, Pennsylvania.

Wherefore, no matter what the location of a hardware store may be and no matter how far from hunting grounds or the wild places that beckon to outdoor life, there is always opportunity to sell sporting goods and camping supplies and hunting equipment.

It requires vision and a certain sweep of imagination to realize the merchandising possibilities of this particular group of commodities.

All this does not necessarily imply elaborate and costly displays.

It does signify, however, that such devices must be

and to the left is a coon. At the top, to the left, is a golden pheasant and to the right, sap-suckers.

"At the left end of the window stands a corn shock, near the top of which is perched a bantam rooster. At the bottom is a rabbit peeping out.

"At the extreme right of the window is a pointer dog, pointing at a flock of partridges.

"Arranged in different parts of the window are groups of guns, hunting knives, axes, boots, camp stoves, ammunition, and other sundries pertaining to hunting. Also arranged here and there are mounted birds, namely, white heron, Lady Anherst pheasant, silver pheasant and owl.

"Displayed on the post at the middle of the window is a rattle snake skin, measuring nearly seven feet."

Gratifying results came from this clever window display in the form of greatly increased volume of sales of ammunition, guns, and camping supplies.

Do not order the tree to be cut down which gives thee shade.

Hardware Dealers from Seven Indiana Counties Meet.

About seventy-five hardware dealers of Knox, Gibson, Pike, DuBois, Martin, Daviess and Sullivan counties, Indiana, held a group meeting Tuesday evening, September 27th, at the Grand hotel, Vincennes, Indiana.

The first speaker on the evening's program was John Dyer, farmer, who discussed the "Relationship Between the Farmer and the Business Man."

Other talks of the evening were made by G. E. Daugherty of Princeton, a member of the executive board of the state hardware association; T. S. McCarty, of Ft. Branch, past president of the state organization; V. B. Shanklin, Franklin, vice-president of the state organization; Herbert M. Sheets of Argos, Indiana, national secretary and G. F. Sheely, state secretary.

The principal address was by Mr. Sheets, who discussed the "Gossip Society."

He criticized severely the gossipers who have been spreading propaganda to the effect that the hardware retailers have been holding up the prices despite the fact that the manufacturers and the jobbers have been giving them reductions.

Will Exhibit Latest Styles and Improvements in Gas Stoves.

Gas ranges to match the color scheme of the kitchen decoration or even milady's gown and with "lines" and safety and economy appliances as multiplied as an automobile de luxe are with us.

The "back to the kitchen movement" which started when servants' wages went soaring is largely responsible. The housewife began demanding that the kitchen be correspondingly attractive to the parlor and particular emphasis was laid upon the biggest single piece of "machinery" that aids her in her work—her gas range. Inventors and manufacturers were stimulated to increased effort.

What they have been able to do in the last year in the way of range "styles" and new appliances will be shown at the annual exhibition to be held by the American Gas Association in connection with its convention in Chicago, November 7-12.

Advance style dope indicates that enamel ranges are quite the thing, and they make them in blue, white or grey to suit. Furthermore, a new enamel has been made that does not crack or come off.

As to lines, smooth corner, fewer joints, enamel from top to bottom, even the burner top, are de trop, and only a damp cloth is necessary to keep these aristocrats of the stove family shining all the time. Nickel trimmings are "in."

Economical gas burning and safety devices are made much of. There is the top burner lighter, for example, that by pressing a button permits a tiny gas flame to flash out to light any burner turned on.

Then there is the "clean top," because it is all enamel, made to take the place of the old iron grids. Star shaped holes are cut above the burners and the part of the enamel sheet around the burner slopes slightly

downward so any spilled water or grease will flow, not on to the burner, but down to the enamel drip pan.

Nowadays you don't have to build your kitchen to fit your stove. There is a gas range for a kitchen, family or purse of every size; studio ranges that fit in between the camouflaged bathtub and the davenport and cabinet ranges for a family that shelters all of its "in-laws."

There are single ovens with broiling burners in the top and baking burners in the bottom. The larger stoves have baking and broiling ovens separate.

A feature made much of are the warming ovens.

Then there is the new broiler, placed above an enamel pan in a rack that is controlled by a lever on the outside of the stove, so as to be raised or lowered for quick or slow cooking.

Guess work in baking is made a thing of the past, for there are ovens with radiators inside, or still better, those that automatically keep a certain heat on for desired minutes or hours. No more burned food, for the housewife can put her dinner in the oven, turn a small wheel at its side to "slow, medium or best" and forget her kitchen duties until dinner is cooked.

Prior Use Wins Trade-Mark Suit for "Red Devil."

Recent decisions in a trade-mark suit of the Smith & Hemenway Company, Incorporated, Irvington, New Jersey, against the Rice Manufacturing Company, Indianapolis, Indiana, in which the trade-mark rights to the name "Red Devil" were declared in favor of the Smith & Hemenway Company, Incorporated, by the United States Commissioner of Patents and the Patent Office Interference Examiner for Trademarks are of particular interest.

Smith & Hemenway Company, Incorporated, manufactures the well-known line of "Red Devil" tools and hardware specialties which bear that trade-mark. The Rice Manufacturing Company manufactures a pneumatic rivet cutter also branded with the "Red Devil" trade-mark. The Smith & Hemenway Company, Incorporated, brought an opposition proceeding against the Rice Manufacturing Company in the United States Patent Office involving the right to the trade-mark "Red Devil" in words or figure in connection with tools and machines.

The Smith & Hemenway Company, Incorporated, proved use of the mark for many years in connection with its line of bolt cutters, pliers, glass cutters, hack saw frames and blades, auger bits, drills, cold chisels and other tools and hardware specialties, and the Rice Manufacturing Company proved use of the same trade-mark for the last three years on the pneumatic rivet cutter which it manufactures.

Both the Commissioner of Patents on Appeal and the Examiner of Interferences decided that the use of the "Red Devil" trade-mark by the Rice Manufacturing Company, Incorporated, is an interference and as a consequence denied registration to the Rice Manufacturing Company.

A clear loss is better than a possible profit far distant.

Red Cross Roll Call Is Set for Next Month.

The American Red Cross will hold its Fifth Annual Roll Call, November 11 to 24, 1921, from Armistice to Thanksgiving Day.

The Roll Call is not a campaign. It is simply an opportunity for members to pay their yearly dollar membership dues and for non-members to join.

Last year the American Red Cross spent more than \$10,000,000 on the disabled service man alone. This was \$4,000,000 more than the aggregate membership receipts. During the twelve months ending June 30, 1921, 2,397 Red Cross chapters maintained a service for the war veterans, extending help to 1,508,640 men. Allotment, compensation and insurance claims were handled and besides visiting the 26,300 men who were in the hospitals on June 27, 1921, the Home Service workers of the various chapters have sought out thousands of men who are in their homes, scattered throughout the country, and have advised them of the assistance the Government will render them, showing them how to obtain that aid. The number of disabled ex-service men is continuously increasing. Hitherto hidden disabilities are asserting themselves and an average of a thousand men a month are reporting for hospital treatment. So it is plain that the Red Cross must continue its cooperation in this direction.

During the 18 months ending June 30, 1921, the Red Cross spent \$1,600,000 for relief for 70 disasters. Since disaster strikes when it is least expected, and since supplies must be rushed instantly to the scene of action, it is necessary for extensive preparation to be planned for future emergencies.

At the request of the Government, the American Red Cross holds the reserve out of which are recruited the Army and Navy Nursing Corps in time of war.

During the war it assembled, equipped, uniformed and assigned 19,877 nurses to active service with our Armies and Navy.

It holds now upon its list 37,787 registered nurses subject to call.

During the past two years it has assigned 1,163 nurses to the U. S. Public Health Service for the care of disabled service men.

It has trained, equipped and assigned 1,335 Red Cross Public Health Nurses to the service of chapters and communities throughout the country.

It has furnished 1,726 instructors in Home Hygiene and Care of the Sick, from whom during the past year 258,710 women and girls have received short, intensive courses, whose effect will be vastly increased efficiency in the prevention and combating of disease.

It is sending overseas constantly nurses to join the medical units working among the destitute children of Central and Eastern Europe. It is establishing and supporting, throughout these war-torn countries, training schools for native nurses.

It is carrying on constantly a campaign in behalf of the enlistment of student nurses among the young women of the country.

Besides this, to promote community health, the Red Cross has developed a nutrition service through which 22,000 undernourished children have been enrolled in

classes in food selection. It has established 260 community health centers and held, last year, 5,100 classes in First Aid in which 104,495 students were enrolled.

A recent European survey shows that while child welfare activities have been established in six countries, including Albania, Belgium, France, Montenegro, Czecho-Slovakia and Rumania, there are still many war orphans for whom no provision has been made. These are the boys and girls of Central Europe, including 800,000 children in Poland and 1,000,000 in Austria and Hungary, with as many in the Balkans and the Baltic states. During the coming year the Red Cross will concentrate its efforts upon these boys and girls, and 90 child welfare units have been established to carry on this work.

Michigan Hardware Retailers Plan Group Meeting.

Hardware dealers in the district tributary to Battle Creek, Michigan, will hold a group meeting, October 14th, at Post Tavern in that city.

Frank E. Strong of Strong-Barker Hardware Company, Battle Creek, will be chairman of the meeting.

The meeting will be in the form of a banquet in the evening and Samuel Davis, of Cleveland, will be the speaker of the evening. His subject will be "Scientific Salesmanship."

Mr. Davis has been giving talks to similar group meetings over the state for some time and is himself an experienced hardware man.

About fifty are expected to attend the meeting.

Auto-Wheel Coaster Now Has Steel Disc Wheels.

The selling attractions of the Auto-Wheel Coaster, made by Auto-Wheel Coaster Company, Buffalo, New



Auto Wheel Coaster With Disk Wheels.

York, have been increased and strengthened by the addition of steel disc wheels, as shown in the accompanying illustration.

The general acceptance of the disc type wheel on many of the most recent models of high-priced automobiles determined the addition of this innovation—an Auto-Wheel Coaster with steel, disc wheels, patterned after automobile wheel design.

Made of cold-rolled steel with shrunk-on steel tire, wood felloe and wood cushion center, this new wheel, it is said, withstands the roughest kind of usage. A shiny automobile hub cap completes the resemblance to a real auto wheel. Reinforced steel axles, new rear braces and a hound support brace are further improvements found in this new member of the Auto-Wheel family.

Dealers are requested to write for full details to J. E. Baumler, Advertising Manager, Auto-Wheel Coaster Company, Buffalo, New York.

Gives Reasons for Moving Offices to Jacksonville.

A letter to the membership from Walter Harlan, secretary-treasurer Southeastern Retail Hardware & Implement Association, gives the reasons for moving the organization's office from Atlanta, Georgia, to Jacksonville, Florida, as follows:

"Inasmuch as it was necessary to move our Insurance headquarters, and are now maintaining our Insurance Department in Jacksonville, Florida, the present Board of Directors of the Southeastern Retail Hardware and Implement Association unanimously agreed that from an efficient and economical standpoint that the Hardware Association and the Insurance Department should be together and operate from the same office.

"The decision of the Southeastern Board was referred to the Officers and Boards of the four States for their approval, which they have given.

"Now, since the Insurance Exchange can not maintain an office in Atlanta, Georgia, by direction of President Fred H. Young, you are hereby advised that Hardware Association headquarters have been moved from Atlanta, Georgia, to Jacksonville, Florida, our office being 460 St. James Building. This curtails the expense of maintaining two offices and the loss of time, money, and efficiency.

"We can give you the same prompt, efficient service from Jacksonville as we did from Atlanta, and after all, what you want is strictly high-class service and this we promise to give you at all times."

Reduces Prices on Gas Stoves.

In addition to the price reductions on "Clark Jewel" oil and gasolene stoves, referred to on page 18 of the October 1, 1921, issue of AMERICAN ARTISAN AND HARDWARE RECORD, George M. Clark & Company Division American Stove Company, Chicago, Illinois, announces new list prices for "Clark Jewel" gas stoves, effective October 3rd.

These list prices apply to the Company's Catalog No. 110 and supplement to Catalog No. 110. Dealers are requested to write for new revised discounts, as the list prices embody a substantial reduction of former quotations.

Issues Artistic Stove Catalog.

Profusely illustrated and with several pages in colors, catalog No. 921 of the Peninsular Stove Company, Detroit, Michigan, is artistic and, therefore, from a selling point of view, helpful to the dealer.

In view of the fact that many retailers can not afford to carry in stock a sample of every stove and range of so varied a line, the catalog can be used to advantage for the purpose of showing prospective customers the different styles and models which are so accurately pictured and described in its pages.

Organizes Eagle Saw Works.

F. L. Underwood, L. L. Tate, J. E. Harris and others are the incorporators of the Eagle Saw Works, Chattanooga, Tennessee. The capital stock is \$50,000.

American Steel & Wire Company Appoints Representative.

In a letter to the trade from F. Baackes, vice-president and general sales agent of American Steel & Wire Company, Chicago, Illinois, announcement is made of the appointment of E. E. Aldous as the company's representative in the St. Paul-Minneapolis-Duluth territory, with headquarters in St. Paul, Minnesota.

Mr. Aldous has been connected with the American Steel & Wire Company in different positions for twenty years. He is well versed in the various products of the company and fully qualified for his new work.

Organizes to Make Window Screens.

The Behrens Manufacturing Company, Fitchburg, Massachusetts, has been organized to make window screens by Henry Behrens and Sumner B. Lawrence.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912, of AMERICAN ARTISAN AND HARDWARE RECORD, Published Weekly at Chicago, Illinois, for October 1, 1921.

State of Illinois, County of Cook, ss.

Before me, a notary public, in and for the State and county aforesaid, personally appeared Etta Cohn, who, having been duly sworn according to law, deposes and says that she is the Business Manager of the AMERICAN ARTISAN AND HARDWARE RECORD and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Estate of Daniel Stern, 620 South Michigan Avenue, Chicago, Ill.

Editor—Richard Moreno, 620 South Michigan Avenue, Chicago, Ill.

Editor—A. George Pedersen, 620 South Michigan Avenue, Chicago, Ill.

Business Manager—Etta Cohn, 620 South Michigan Avenue, Chicago, Ill.

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Sole Owner—Estate of Daniel Stern—Leo Koretz and S. Westerfeld, Trustees—620 South Michigan Boulevard, Chicago, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state).

There are none.

4. That the two paragraphs next above, giving the names of the owners stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

ETTA COHN,
Business Manager.

Sworn to and subscribed before me this 1st day of October, 1921.

JOSEPHINE L. SCHROEDER,
Notary Public.

(My commission expires May 20, 1924.)

Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

111.—A gas manufacturing company in a city of Chile desires to purchase gas heaters, and all articles which are used by consumers of artificial gas. Quotations should be given c. i. f. Talcahuano. Correspondence should be in Spanish. Reference.

112.—The American representative of a mercantile firm in Australia desires to purchase and secure an agency for the sale of tools, padlocks, lanterns, lamp glasses or globes, table and pocket cutlery, meat choppers, and household hardware lines, such as aluminum and enamelware. Purchases to be paid for in cash. Reference.

119.—A mercantile firm in Switzerland desires to purchase casters for furniture. Correspondence should be in German or French.

Coming Conventions.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 17, 18 and 19, 1921. Fred D. Mitchell, Secretary-Treasurer, 4106 Woolworth Building, New York City.

National Hardware Association and auxiliary associations, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, October 17, 18, 19, 20, 21, and 22, 1921. T. James Fernley, Secretary-Treasurer, 505 Arch Street, Philadelphia, Pennsylvania.

The Western Retail Implement, Vehicle and Hardware Association, Kansas City, Missouri, January 17, 18, 19, 1922. Exhibition at Convention Hall in charge of Louis W. Shouse. Headquarters, Coates House. Sessions in Century Theatre. H. J. Hodge, Secretary, Abilene, Kansas.

Pacific Northwest Hardware and Implement Association Convention, Davenport Hotel, Spokane, Washington, January 17, 18, 19, 20, 1922. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Oregon Retail Hardware and Implement Dealers' Association Convention, Imperial Hotel, Portland, January 24, 25, 26, 27, 1922. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Association, Jefferson County Armory, Louisville, Kentucky, January 24, 25, 26, and 27, 1922. J. M. Stone, Secretary-Treasurer, Sturgis, Kentucky.

Indiana Retail Hardware Association, Convention and Exhibition, Athenaeum Hall, Indianapolis, January 24, 25, 26, 27, 1922. G. F. Sheely, Secretary, Argos.

West Virginia Hardware Association Convention and Exhibition, Wheeling, January 31, February 1, 2, 1922. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Iowa Retail Hardware Association Convention and Exhibition, Coliseum, Des Moines, Iowa, February 21, 22, 23, and 24, 1922. A. R. Sale, Secretary-Treasurer, Mason City, Iowa.

Nebraska Retail Hardware Association Convention, Lincoln, January 31 and February 1, 2, and 3, 1922. George H. Dietz, Secretary, 414-417 Little Building, Lincoln, Nebraska.

Michigan Retail Hardware Association Convention and Exhibition, Grand Rapids, Michigan, February 7, 8, 9 and 10, 1922. Karl S. Judson, Exhibit Manager, 248 Morris Avenue, Grand Rapids, Michigan. A. J. Scott, Secretary, Marine City, Michigan.

Oklahoma Hardware and Implement Association Convention and Exhibition, City Auditorium, Oklahoma City, Oklahoma, February 7, 8, 9, and 10, 1922. W. B. Porch, Secretary-treasurer, Oklahoma City.

Wisconsin Retail Hardware Association Convention and Exhibition, Milwaukee, February 8, 9, 10, 1922. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Pennsylvania and Atlantic Seaboard Hardware Association, Inc., Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, February 13, 14, 15, 16, 17, 1922. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh.

Illinois Retail Hardware Association Convention, Hotel Sherman, Chicago, February 14, 15, 16, 1922. Leon D. Nish, Secretary, Elgin, Illinois.

Minnesota Retail Hardware Association Convention, St. Paul, February 14, 15, 16, 17, 1922. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

Ohio, Hardware Association Convention and Exhibition, Columbus, February 14, 15, 16, 17, 1922. Headquarters, Deshler Hotel. Exhibition, Memorial Hall. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Missouri Retail Hardware Association Convention and Exhibition, St. Louis, Planters Hotel, February 21, 22, 23, 1922. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis, Missouri.

New England Hardware Dealers' Association Convention and Exhibition, Paul Revere Hall, Mechanics' Building, Boston, Massachusetts, February 21, 22, 23, 1922. George A. Fiel, Secretary, 10 High Street, Boston.

Virginia Retail Hardware Association, Roanoke, Virginia, February 21, 22, and 23, 1922. Thomas B. Howell, Secretary, Richmond, Virginia.

South Dakota Retail Hardware Association Convention and Exhibition, Mitchell, South Dakota, February 21, 22, 23 and 24, 1922. H. O. Roberts, Secretary, 1030 Metropolitan Life Building, Minneapolis, Minnesota.

New York State Retail Hardware Association Convention and Exhibition, Rochester, February 21, 22, 23, 24, 1922. Exhibition at Exposition Park. Headquarters and sessions at Powers Hotel. J. B. Foley, Secretary, 412-413 City Bank Building, Syracuse, New York.

Hardware Association of the Carolinas Convention, Winston-Salem, North Carolina, May 17, 18, 19 and 20, 1922. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Sheet Metal Contractors' Association of Indiana, Indianapolis, Indiana, May 15, 1922. Ralph R. Reeder, Secretary, 312 East Sixteenth Street, Indianapolis, Indiana.

National Association of Sheet Metal Contractors Convention and Exhibition in the Athenaeum, Indianapolis, Indiana, May 16, 17, 18, and 19, 1922. Edwin L. Seabrook, Secretary, 608 Chestnut Street, Philadelphia, Pennsylvania.

Retail Hardware Doings.

Illinois.

Jacob Eye, veteran hardware dealer, has sold his hardware business at 8 North Broadway, Aurora, to the hardware firm of Heimsath, Elrick and Grommes. Mr. Eye has retired from business.

C. J. Hill and Son, 127 East Second Street, Pana, have added a new stock of hardware, which they will operate in connection with their harness business.

Fire totally destroyed the Kinder Hardware Store at Ladd.

Indiana.

O. E. Hull and Earl Emerson of Bluffton have traded their hardware store, operated under the name of the Bluffton Hardware and Implement Company, to Fred Reischeiderfer, for a farm in Michigan.

Iowa.

George Wallace of Beaman is putting in a stock of hardware and will handle that in connection with his harness and saddlery business.

Becker and Neal have purchased the hardware business of Josiah Deeming at Waterloo.

A business deal has been completed at Washington whereby Bristow and Corley take over the Robinson hardware stock and Robinson Brothers take over the Bristow and Corley implement business, retaining the plumbing and tinning departments.

Kansas.

The Shearer and Moore hardware store at Fredonia was destroyed by fire.

Michigan.

Gilbert P. Fugere and Daniel J. Eck have purchased the Geusch Hardware Store at the corner of Stephenson Avenue and East Ludington Street, Iron Mountain, and will do business under the firm name of the Fugere-Eck Hardware Company.

Fred Taylor of Sau't Ste. Marie has merged his hardware, agricultural implement, automobiles, accessories and parts business into a stock company under the style of the Sooford Auto Company, with an authorized capital stock of \$25,000.

The Kinde Hardware Company of Bad Axe has been sold to William Wahl.

South Carolina.

The hardware store of A. S. Blackmon at Orangeburg has been destroyed by fire.

Washington.

The Holly-Mar Company of Centralia, dealers in shelf hardware and sporting goods, passes to E. A. Hollingworth as sole proprietor, F. H. Mars retiring.

Wisconsin.

Louis Meyers, formerly of Nekoosa, has decided to go into the hardware business with William Houden at Pasadena, California. Mr. Houden is also a Nekoosa man.

Advertising Help and Comment

Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.

There is a heart-warming tone of familiarity in the wording of the advertisement of Kaufman's, reproduced herewith from the *Anderson Bulletin*, Anderson, Indiana.

Whoever prepared the text has the happy faculty of being able to write in the same vein in which most people talk.

create desire to buy.

To do this, a favorable impression must be made upon the prospective purchaser.

Therefore, the advertisement requires that elusive element which, for lack of more definite description, we call "the human touch."

Kaufman's "End of the Week"

use high-sounding phrases or the formal language of dignified announcements.

Hence, it is strongly human, warm, and appealing.

It is a pity that such an exceptionally good piece of advertising writing should be marred by typographical errors, of which there are six.

In the last line of the first paragraph, one error occurs. In the fifth line of the fourth paragraph is another. The fifth paragraph has three more such errors.

While typographical errors of this kind do not destroy the force of the advertising appeal, they have an undesirable effect because they distract the thought from the things advertised to the blunders of the type.

With the exception of these typographical defects—which can easily be remedied—The Kaufman advertisement is a model worthy of imitation both textually and as to its general form and emphasis.

* * *

Watch Carefully the Wording of Your Advertisements.

Advertising space costs the same, whether the reading matter be properly worded and attractively presented, or otherwise.

For example, one need not be perfect in the use of English in order to appreciate the unconscious humor involved in the following advertisement of an automatic device for watering hogs:

"The pigs can, of course, be poured some water or slop over the fence into the trough."

A zealous dry goods merchant calls attention to the character of his service as follows:

"Our service is prompt and satisfactory. We cater to busy people—no waiting at this store. Our customers are quickly wrapped up, tied, and handed their package by experienced bundle clerks."

The feeling of good-natured friendliness which the average reader derives from the sentences of this advertisement is a much bigger factor in the building of the good will than one would imagine at first thought.

Naturally, the function of an advertisement is to gain attention and

specials are set forth as news and with a mode of expression which carries the idea of genuine interest to the customers of the store.

The advertisement talks in a straightforward way, eye to eye, with the reader.

The words employed are everyday words. No attempt is made to

KAUFMAN'S "END OF THE WEEK" SPECIALS



Thursday's Good News

from "the hardware store"

Thursday's papers always bring great news from our store, and from the ways our friends "nab" the specials up on Friday and Saturday, it looks as if every one looks forward to those days.

The last few weeks has seen a change in our "specials" policy, with the result that specials are smaller in number but greater in value. Just look over this week's list:

Genuine AC Cico Spark Plugs

Ford owners, Overland owners, Studebaker owners, or owner of any car taking a half inch spark plug, lend an ear! Friday and Saturday you can purchase any number of genuine A. C. Cico spark plugs here for a "song." Selling regularly for 65c each, an extra special at.....

29c

Special Sale Solid Steel Hammers and Hatchets

Here are two "specials" from our builders' hardware department that are more than unusual. The claw hammer is Vanco tool, made of solid forged steel, black finish. Regular price \$1.10. We have only eight. The hatchet is an acme of drop forge steel, same finish as above. Regular price \$1.15; we have only six of these. Your choice of either for the two days.....

75c

BOYS! BASE BALLS

Jimmy and Skinny, and the rest of the gang had better make a "bee line" for our store if they expect to "cash in" on this wonderful. Boys' the balls have been selling all summer for 25c each. Friday and Saturday only.....

9c

4 Big Bargains in Graniteware

We haven't forgotten the women folks. We've just left the best for the last. A special purchase enables us to offer our friends four different pieces of gray enamel ware at a price below anybody's. There is a tea kettle, water pail, combinet and dish pan. The regular prices range from 95c to \$1.65. Special for the two days only at....

49c and 69c

Sale of

Granite-

ware

49c
69c

"Kaufman's"

THE HARDWARE STORE SINCE '86

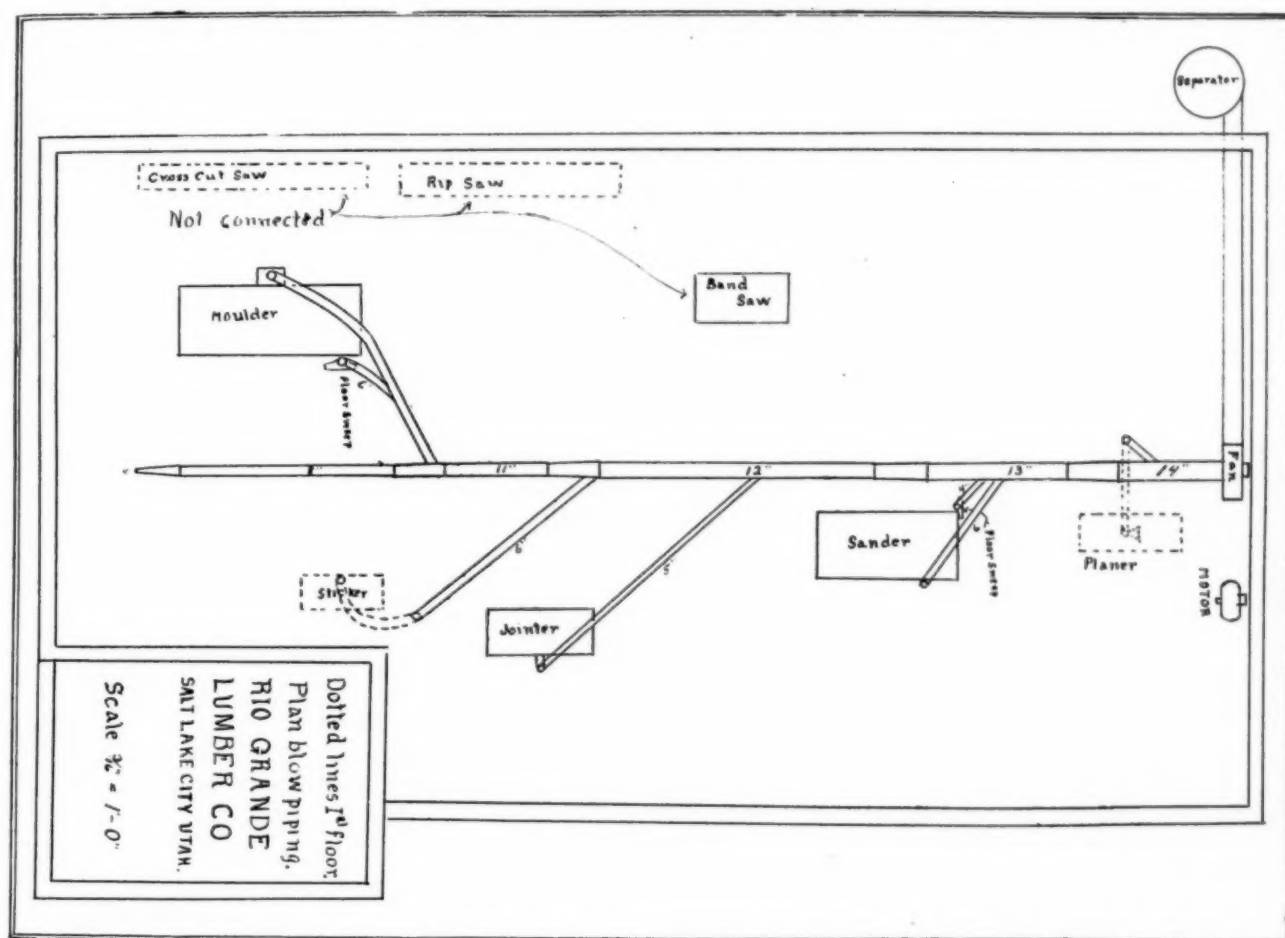
Hugh F. Munro Tells of Development of Fan Exhaust and Blow Pipe Work.

A Comparatively New and Highly Profitable and Interesting Department of Sheet Metal Work.

One of the very interesting papers read before the Annual Convention of the National Association of Sheet Metal Contractors, recently held at Pittsburgh, had for its subject, "Blow Pipe and Exhaust Work."

Hugh F. Munro, Philadelphia, who prepared the paper, showed himself not only thoroughly posted on this branch of the sheet metal business, but he gave evidence that the Association has in its membership men who can "talk" fluently and "say something" on the subject assigned.

It may be a surprise to many of you to learn that the fan blower, the only means we have of taking air and making it do our bidding, is only about sixty years of age. About 1860, it occurred to a man in Boston, Massachusetts, if a current of air could be moved by waving a fan, the same thing could be more effectively done by attaching a number of fans on a revolving shaft. Later, he built a casing around this paddle wheel arrangement, made an opening in the rim, and had a current of air in a certain direction with a velocity of



Layout for Fan Exhaust Piping in Woodworking Plant of the Rio Grande Lumber Company, Salt Lake City, Utah. Designed by O. W. Kothe, Saint Louis, Missouri.

The "notes" used by Mr. Munro were typewritten on a sheet of paper half the size of this page and comprised only about fifteen lines in all, but here is the stenographic report of his address:

The history of modern industry will probably be divided into three parts—the discovery of coal as the great source of energy; discovery of electricity, transmitting that energy; discovery of air as an aid to many of our modern industrial processes.

I am here this afternoon to tell you what air can be made to do. It is an uncontrolled and an uncontrollable force. The Scriptures say: "It bloweth where it listeth." It is part of my business to make it blow where I list.

volume depending upon the size of his paddle and its speed. Thirty-six years later, 72 per cent of all the machines in the world used to move air were built upon this principle—the blower.

Air currents can be made to do many things. A large part of our work is experimental, every day finds some new thing an air current can be made to do. You heard this morning that it required over a ton of air to melt a ton of iron. You can judge from this statement how important air is when controlled and made to do useful work. Its principal use at first was to aid combustion, help to burn things up.

A current of air can be used to hasten processes which, left to themselves, retard the rest of the factory

in production. Cooling substances that are prepared while hot, hardening and drying substances that must be handled first in a fluid or liquid condition. All of this applies to the fan blower which does the work after the air has left the fan.

The exhaust is a different application of the fan blower. The difference between the blower and exhauster is this: The blower handles the smallest possible volume of air at the highest pressure. The exhauster handles the largest volume of air at the lowest pressure that will do the work.

At one time six men in Boston produced all the fans and exhausters the world required. Today the same concern employs 1,500 men, has a plant covering fifteen acres, and makes over 3,000 kinds of fans or exhausters.

The statement was made to me some time ago that we could save 20 per cent of the price of a suit of clothes through the fan. This, properly applied, will pick material from a machine, convey it to another machine or to bins. It will do the work more quickly and economically than the operators can do it.

You have heard of the recent application of a fan to the warm air furnace. I am inclined to think there is a wonderful future for it in helping out balky furnaces. I was greatly interested this morning to hear that an ordinary furnace can have its efficiency doubled and trebled by applying an air current with a fan placed where we usually put the cold air inlet.

A great difficulty faces the man who undertakes to convey material with a fan, because he must have a large volume of air. The problem is to separate the material from the air after it leaves the fan. To accomplish this a device called a separator is used in all sorts of planing mills and woodworking establishments. We go into such a plant and design an iron hood over the machine, that will enable the cutter to throw shavings into the part of the hood where the velocity of the air will pick them up and send them outside the building. Within the last six years we have learned to separate sawdust from shavings. I am told that there are fifty separate uses for sawdust alone—this made possible by the fan.

Safety-First laws in a number of States decree that on dust producing machines there must be some means for taking the dust out of the atmosphere. Experts have drafted special rules for the application of fans, removing dust from all the grindings, buffing, polishing and abrasive processes. They determine the size of the fan, its speed, suction pressure, etc. For some time the blower men have been making a bluff of this, simply because their workmen compel them to. This class of work is now being standardized. I venture to say it will take nearly twenty years to equip the grinding and polishing industry of Pennsylvania alone with the present number of men engaged in the work.

There is an abundance of engineering data issued by the various companies, but the trouble comes in the application of those data. We have been many years in finding out what not to do. Some time ago, a construction engineer who designed a large piano factory, said: "When it comes to this blower business, I am constantly up in the air." That factory could not run an hour before the blower was put in. We should have

such information readily accessible as will enable the engineer to correlate the blower with the rest of the plant. Those of us who are engaged in this work are frequently called upon to apply the blower and exhaust-er where it has never been applied before, very largely of an experimental character.

The field is simply indefinite; there appears to be no end to it, but it has not been sufficiently manned. It has been taken care of to some extent, very inefficiently, by men who are induced to do it because they are doing other work in the building. Data should be secured that will not only enable the engineer to deal effectively with the problem at the beginning, but furnish such information as may be necessary when he is designing a plant. After that the intelligent sheet metal worker, understanding his business, can come along and do the work as it should be done.

In the accompanying illustration is shown a fan exhaust system operated in the woodworking plant of the Rio Grande Lumber Company, Salt Lake City, Utah.

In this drawing we have a very simple layout for a shaving system. The main suction makes a straight run, while the branch pipes range from 4 to 6 inches in diameter.

We have 5 machines to connect, a moulder, sticker, jointer, sander and planer with two floor sweeps. Three machines are not piped.

Tees should always be tapped in the large end of a taper joint, or placed in the straight pipe just beyond the taper. The making of hoods for such machines is very important.

Careful watch must be taken so the shavings have free exit, and the hoods designed to aid free travel.

The fan furnishes the pulling power and by proportioning the pipes to take care of the shavings the suction will carry all the substances away.

Too heavy blocks, etc., should be provided against being pulled in the system.

This layout was furnished by O. W. Kothe, Principal of Saint Louis Technical Institute, St. Louis, Missouri.

Saves Big Per Cent of Fuel.

It is generally known that the average householder neglects to keep the water pan of his furnace filled during winter.

Hence, his home is lacking in the requisite amount of humidity to give healthful heat and he has to burn too much fuel to obtain comfortable warmth.

This undesirable state of affairs can be obviated by the installation of a Triplex Air Washer, manufactured by the Frank Foundries Corporation, Davenport, Iowa.

With a minimum of care and attention, this new apparatus will assure clean, pure, moist air at a relative humidity of 50 to 55 per cent and thus render the home comfortable at 65 degrees in the coldest weather.

Dealers and installers of warm air heaters can greatly increase their service to their patrons by means of this apparatus. Therefore, it is advisable to write to Frank Foundries Corporation, Davenport, Iowa, for particulars.

Jake Temple Is Not Afraid of Tackling Big Jobs and He Knows How to Do Them Right.

Kalamazoo, Michigan, Sheet Metal Contractor Completes Very High Class Installation in Pharmaceutical Plant.

There are some sheet metal contractors who are not afraid of tackling big jobs—because they know how to handle them, so that their work will prove satisfactory to those who order them—and so that when the work is completed it will stand to the credit, not only of the contractor in question, but also of the sheet metal industry in general.

There is a great satisfaction in being able to point to a real big job of sheet metal work performed in a high class manner. Every instance of that sort helps to place the sheet metal contracting business on a higher plane, and it is, therefore, a real pleasure for us to show by illustration and a bit of explanatory matter the very fine installation in the plant of Upjohn Company, Kalamazoo, Michigan, manufacturers of pharmaceutical products.

This installation and the entire manufacture of the immense percolators, as well as of the ingeniously constructed hood and piping in connection with the great evaporating kettles, was planned and supervised by J. A. Temple of the Kalamazoo Sheet Metal and Manufacturing Company, Kalamazoo, Michigan.

The entire job is a fine example of what a real sheet metal man can do when he has an opportunity to go ahead and do his best.

Figure 1 shows a number of percolators, 12 feet high and 48 to 60 inches in diameter, made of 14 and 16 gauge "Armco" Ingot Galvanized Iron.

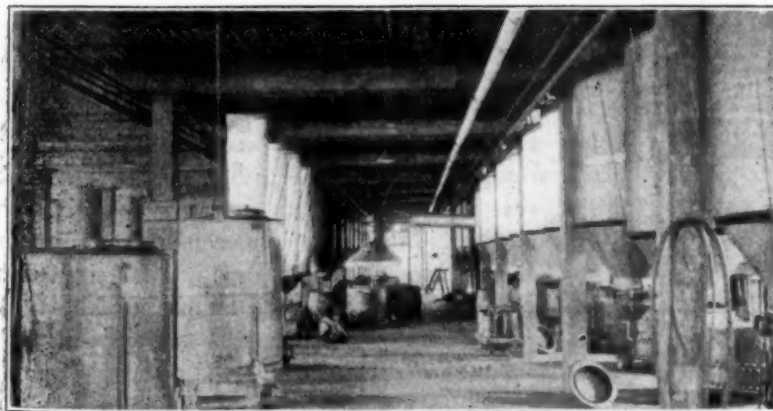


Figure 1.—Showing Large Percolators Made of 14 and 16 Gauge Galvanized Armco Ingot Iron, Installed in Pharmaceutical Plant of Upjohn Company by Kalamazoo Sheet Metal and Manufacturing Company.

Drugs are packed in these percolators, and alcohol, acids and other menstruous agents of various character are then allowed to percolate through the packed mass. The chemical re-action during this process necessarily requires that the material of which these containers are made be of the very highest rust- and corrosion-resistant grade.

In Figure 2 we have the ingenious piping and hood arrangement which is used for exhausting and carrying off of the steam from the immense evaporating kettles.

Frequently there is a high acid content in the drugs placed in these kettles, so that the material used in the exhaust system must be of the very best.

The pipes taper off from 30 to eight inches in diameter and were made of 18 to 24 gauge Armco



Figure 2.—Piping and Hood Arrangement for Steam Exhaust, Made of 18 to 24 Gauge Armco Ingot Iron.

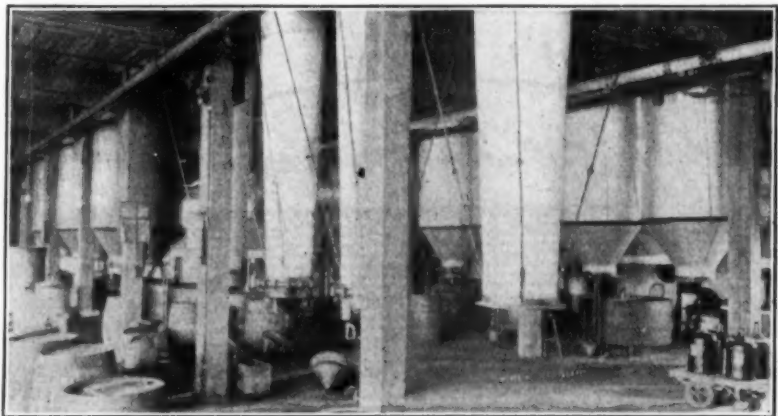


Figure 3.—General Interior View of Fine Installation of Sheet Metal Piping in Plant of Upjohn Plant—Work Done by Kalamazoo Sheet Metal and Manufacturing Company.

Figure 3 shows a general view of the interior of the plant, to which Mr. Temple may well point with pride, for it certainly is a fine job and does him credit, both as the general scheme for the layout and for the manner in which the work was done.

It should be noted that there are no problems in this job which the average skilled sheet metal worker can not solve without much difficulty.

The success of Mr. Temple should encourage others to seek contracts of this kind and thus widen the scope of their business. There will be no dull times in the shop which handles jobs of this kind and substantial profit will result.

Zideck Explains Construction and Purposes of Automobile Radiator.

Must Absorb and Radiate Heat Generated by Motor and Must Be Strongly Constructed But of Light Metal.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by E. E. Zideck, New York City.

FOURTH ARTICLE.

In radiator construction, the main requirement is heat absorption and heat conduction. The surplus heat generated in the motor must be absorbed by water circulating through its chambers as quickly as it is generated. The water carries this heat into the radiator, and in turn, the radiator must absorb it and radiate it into the air. The water that flows back to the motor should be free of the heat which it contained when entering the radiator.

The second requirement of the radiator is that it holds water. Its parts through which water circulates under the thermo-syphon or pump force, must be strong enough to withstand that force but never should they be of heavy metal, or joined heavily, so as to sacrifice the first requirement of a radiator, that of heat absorption and conduction, for the second requirement, that of holding water and not breaking apart.

The radiator, in the main, consists of three parts: 1—hot water tank; 2—the core; and 3—the cold water tank.

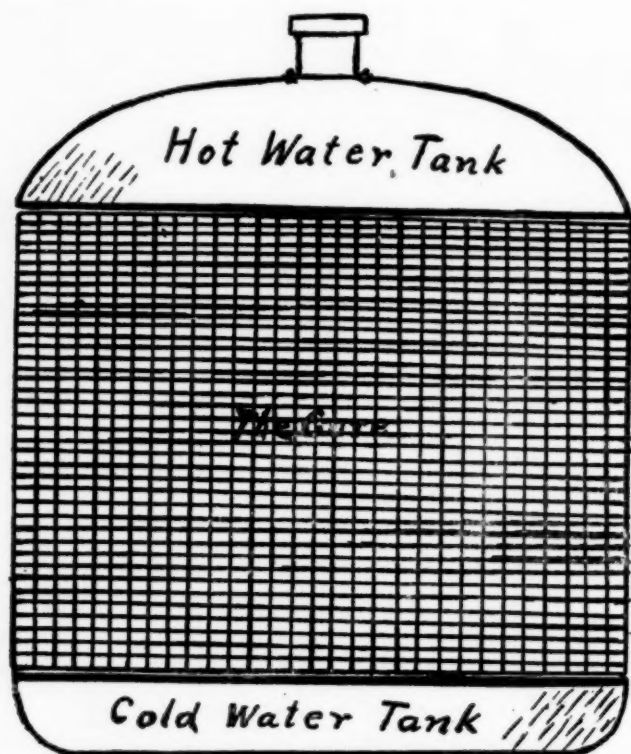
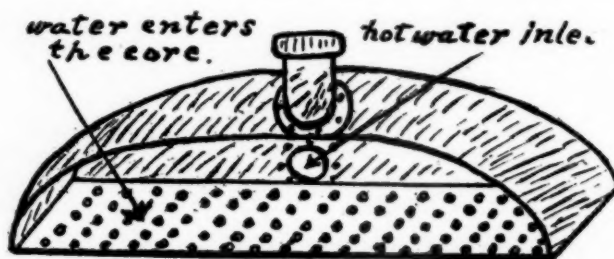


Illustration Showing Construction and Main Portions of Automobile Radiator.

The upper tank is the hot water tank; here comes the hot water from the motor jackets. From this tank it falls, flows, or is drawn through the numerous water channels and between the air passages of the core. The lower tank receives the water from the core, and because the water flowed in small streams

through the cold of the fanned-in air, it is cold when entering the lower tank. Hence it flows, cooled, back to the motor.

The upper tank of a radiator has no other service to perform but that of receiving water from the motor and distributing it over the numerous entrances into the water channels of the core. It does no cooling. It can be, and usually is, constructed of heavy metal. In many of the newer constructions of radiators, it is



Showing Where Water Enters the Core and the Hot Water Inlet.

cast. Same is true of the lower tank. Its purpose is to receive the numerous small streams of water coming from the core and unite them in one or more large streams flowing to the motor. It does no cooling, and its construction has to do with water-tightness and durability alone.

The *cooling part*, and consequently the *main part* of the radiator is its *core*.

The radiator core is variously constructed of either tubes placed to connect the two tanks and having thin brass plates, called fins, to deflect the air; or, of thin metal plates corrugated or folded to form water channels and air passages. The former construction is called the *tubular fin core*; the other, the *cellular core*.

Both are made of thin brass or copper. These two metals are known to absorb and conduct heat quickly. In addition, they can be made soft and in this condition corrugated, stamped and shaped easily. Both metals will readily solder and, soldered right, hold better than either of the coated metals would. Besides, brass and copper are immune to rust.

The radiator core is made to contain numerous separate water channels each of which is enveloped by air, so that the heat of the water passing through may be conducted into the air at numerous places simultaneously. This arrangement permit of (a) the stream of hot water coming from the motor into the upper tank being divided into numerous small streams; (b) each of these small streams flowing through a tube or a channel formed of metal of good conductivity; and (c) each of the tubes or channels being struck by the breeze of the fanned-in air.

In the tubular fin core, the air strikes not only the

tubes but also the fins, thereby imparting its cold to both the metal of the tubes and the fins. The air-struck fin metal, cooled by the compact, imparts the cooling influence to the metal of the tubes to which

it is connected by close fit or solder, or both, and the tube metal in turn imparts the cold to the water flowing through it.

(To Be Continued)

Mr. Guesser Owes His Wife Ten Thousand Four Hundred Dollars for Twenty Years' Wages as His Bookkeeper.

There Are Thousands of Guessers in Business Who Think They Are Wealthy but Who in Reality Are as Poor as Church Mice.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Cleveland, Ohio

I had occasion to go into A Guesser's shop the other day, and he was in a happy mood. He had just finished inventory and was full of cheer.

It seemed that his business was in prosperous shape and he was happy.

"Well, old man," he said cheerfully, "I have just finished inventory and feel pretty good. I want you to have dinner with the Missus and myself. I kinda feel like celebrating the event."



J. C. Greenberg.

Dear Reader, what would you do in a case like this? You'd eat, wouldn't you? Well, so did I.

After dinner, we sat in the office talking over his business, and he told me that he has at last reached success. He told me that he was worth ten thousand dollars and that he had earned it all in the sheet metal business. Gee! Don't this sound

good? I'll say it does.

Guesser and I were real, confidential friends, because I had known him for twenty years as a hard-working man, sober, and industrious.

"Guesser," I said, "I wish you would tell me just how you have made your ten thousand dollars. You know I write for the AMERICAN ARTISAN AND HARDWARE RECORD, and I feel sure that you would not object if I spread your method amongst the less successful men so that they might use your methods."

"Certainly I will be glad to tell you," he volunteered. "I want all sheet metal men to earn profit and I feel flattered to have you interview me on this subject."

"Thank you, Mr. Guesser," I said cheerfully, "I feel that we can do our profession a great good. First, how do you know that you are worth ten thousand dollars? How do you really know that all you have is your own?"

"Well," answered Guesser, "to begin with, you will, of course, understand that I really have not got ten thousand dollars in cash, but I have it invested in property. This building we are in is worth about three thousand dollars. The home I live in is worth about four thousand dollars, and I have another piece of property on the west side which is worth one thousand dollars, and my tools and stock amount to about two thousand. This makes ten thousand in all."

"Can you," I asked him, "sell these pieces of property for the prices you mention at any time?"

"Yes, I can," he answered quickly, "I can sell out this afternoon if I choose and have ten thousand dollars in cash."

"Mr. Guesser," I said with great enthusiasm, "it does me good to be able to see the facts. I am pleased that you are so well fixed. I wish that all sheet metal men were like you."

Just then, the telephone bell rang, and Mrs. Guesser, seeing that we were busy, answered the phone. It seemed that a customer wanted to know the amount of his bill, and Mrs. Guesser proceeded to make the bill out and mail it. I never had met Mrs. Guesser, so I asked Mr. Guesser who the lady was.

"Don't you know my wife?" he asked in surprise, "let me introduce her to you." I was introduced to Mrs. Guesser, and by that time we were asked by her to come in to the house and have dinner.

The meal was a splendid one. It was well cooked, well arranged and well served. During the meal Mrs. Guesser told me how she and her husband have worked day and night to accumulate all they had, and what a good pal she was to him. It really was sentimental. They had been in business for twenty years, suffered hardships together, and are now enjoying success together. It was truly a great satisfaction.

Just the same I was busy thinking hard. After dinner I furnished the cigars and we repaired to the shop to continue our talk.

It struck me as odd that he had his wife working all these twenty years as bookkeeper, and office manager. Figures began to ramble through my brain by the miles. Finally I asked Guesser this question.

"Mr. Guesser, how much did you pay your wife for the twenty years of hard work?"

"Pay her?" he asked in astonishment, "What do you mean, pay her? She is my wife. She was sup-

posed to work with me and do all she could to help our mutual success?"

"Very well, Mr. Guesser," I answered. "Is your wife worth ten dollars a week in your business as a bookkeeper?"

"Ten dollars a week," he said in astonishment, "Why she is worth twenty-five dollars a week to any business."

"No," I said. "Let us figure only ten dollars a week. I want to be conservative about it."

"All right," he agreed. "Let us figure for the sake of argument that she is only worth ten dollars a week, what does that matter?"

"It matters just this, Mr. Guesser," I said slowly and deliberately, "At ten dollars a week, your wife is worth \$520 a year. She has worked for you 20 years. Twenty times \$520 is \$10,400. This is what you really owe your wife for salary for twenty years' work."

"If you had paid her only ten dollars a week for first-class office service, which you really owe her, you would at this time be \$400 in the hole."

"Where does your success come in? Where do you get the idea that you are well fixed. You only guess that you are worth ten thousand dollars. You are worse than broke, man. Here you owe your wife twenty years' back pay and never intend to pay it. What kind of a business man are you, Mr. Guesser?"

This last argument struck Mr. Guesser right straight between the eyes. It took his breath completely away. All that he could say after he got his breath was, "Well, I'll be damned!"

"Do you really think I am \$400 in the hole?" he asked in a halfhearted sort of way.

"I don't only think so," I answered, "I know so, because Mrs. Guesser could collect this money by law any time she chooses to do so."

When I left Mr. Guesser's place of business I really had to laugh. There are thousands of business men who enslave their wives or daughters. I say **enslave**, because when a man compels his wife, daughter or anyone else to work a life time for nothing, it is slavery and nothing else.

There are thousands of Guessers in business who think they are wealthy when in reality they are as poor as church mice.

Does your wife or daughter work for you for nothing? Do you think that they should? Just wake up and open your eyes to a fact that maybe you are guilty of. Mr. Guesser has forgotten his overhead and bid away twenty years' work for nothing, and now he owes his wife \$400 which he can not pay. Moral: Don't be a guesser.

Adopt the Budget System.

Failure of commercial establishments to chart their course in such a way as to avoid the reefs and shoals of bankruptcy has resulted in many business shipwrecks.

Lack of knowledge of the exact financial condition of his business has caused many a man whose conduct has been marked by enterprise and energy to come to grief.

Many of the troubles and worries in the American home have been caused by the same sort of ignorance. The problem can not be solved by merely living within the family's income.

The contents of the pay envelope must be apportioned in such a way as to leave a reasonable sum each week for some safe investment.

Treasury savings securities are backed by the strength of the Government; bear interest at the rate of 4 per cent per annum, compounded quarterly, when held to maturity, and can always be converted into cash at more than the purchase price.

Organizes Sheet Metal Works.

The Worcester Sheet Metal Works has been organized by Patrick J. Murphy and Max Cohen. It is located at 166 Mechanic street, Worcester, Massachusetts.

Notes and Queries.

Vortex High Oven Range.

From Stoffel Brothers, Lebanon, Illinois.

Please inform us as to the name and address of the manufacturers of the Vortex High Oven Range.

Ans.—Cole Manufacturing Company, 3218 South Western Avenue, Chicago, Illinois.

Iron Ornamental Fences.

From Samuel P. Hedges, West 14th Street, Rochester, Indiana.

Will you kindly advise us who makes iron or steel ornamental fences for porch roof decks?

Ans.—Fred J. Meyers Manufacturing Company, Hamilton, Ohio; F. P. Smith Wire and Iron Works, 2346 Clybourn Avenue, Chicago, Illinois.

Wood Rollers and Steel Springs.

From Werner's Metal Shop, 224 Third Street, Tracy, Minnesota.

Who makes wood rollers about $\frac{3}{4}$ inch in diameter, 7 inches long, with a hole $\frac{5}{16}$ inch in the center? Where can we buy small steel springs that will take $\frac{1}{4}$ inch diameter rods?

Ans.—Acme Wood Turning Company, 405 Milwaukee Avenue; Baurele Brothers Manufacturing Company, 1919 South Fairfield Avenue; Artistic Wood Turning Company, 515 North Halsted Street; all of Chicago, Illinois. 2. American Steel and Wire Company, 208 South LaSalle Street, Chicago, Illinois.

Upper and Lower Hose Connections.

From W. J. Parry and Son, 738 Mahoning Avenue Youngstown, Ohio.

Could you advise us where we could buy the upper and lower hose connection for use in making a Ford radiator?

Ans.—The Beckley-Ralston Company, 1801 South Michigan Avenue, Chicago, Illinois.

Marquises.

From Harry T. Klugel, North Emporia, Virginia.

Please refer me to firms who manufacture marquises.

Ans.—Milwaukee Corrugating Company, Milwaukee, Wisconsin; Fred J. Meyers Manufacturing Company, Hamilton, Ohio; F. P. Smith Wire and Iron Works, 2346 Clybourn Avenue, Chicago, Illinois; Joseph Halsted Company, 1233 West Randolph Street, Chicago, Illinois.

Illustrations of New Patents

Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.

1,388,866. Wrench. Frank Lambert, Brooklyn, N. Y., assignor to Thomson Meter Company, a Corporation of New Jersey. Filed Oct. 22, 1920.

1,388,966. Electric Heating and Regulating Device for Incubators. William G. Nelson, Racine, Wis. Filed Jan. 15, 1920.

1,388,979. Socket-wrench. Ora E. Stewart and Macklin K. Combine, Columbus, Ohio. Filed March 3, 1921.

1,389,032. Electric Iron. Ralph C. Curth, Columbus, Ohio. Filed Feb. 10, 1920.

1,389,158. Signal-Lantern. Louis D. Peters, Jackson, Ohio. Filed Oct. 4, 1920.

1,389,249. Lawn-Mower. Robert R. Kitchel, Ridley Parks, Pa. Filed Sept. 24, 1920.

1,389,305. Kettle. Henry M. Hull, Fairfield, Conn. Filed Oct. 15, 1920.

1,389,497. Attachment for Oil-Stoves. Henry Ferr, Mason City, Iowa. Filed Nov. 29, 1920.

1,389,578. Auger. Robert W. Charlton, Pineville, La., assignor of one-half to Harry Mairus, Rapides Parish, La. Filed Oct. 18, 1920.

1,389,381. Wrench. Charles A. Dies, Chicago, Ill., assignor to John V. Larson, Chicago, Ill. Filed March 27, 1919, Serial No. 285,600. Renewed Feb. 8, 1921.

1,389,588. Grinder. Andrew Klay, Lima, Ohio. Filed Oct. 17, 1919.

1,389,614. Burner for Vapor-Stoves. Henry Price Ball, Brooklyn, N. Y., assignor to S. Sternau & Company, Inc., Brooklyn, N. Y., a Corporation of New York. Filed Feb. 20, 1919.

1,389,619. Laundry-Washing Machine. George R. Boomer, Spokane, Wash., assignor of one-half to Horatio M. Mobbs, Spokane, Wash. Filed March 10, 1919.

1,389,631. Radiator. Edward T. Curran, Detroit, Mich. Filed Dec. 23, 1918.

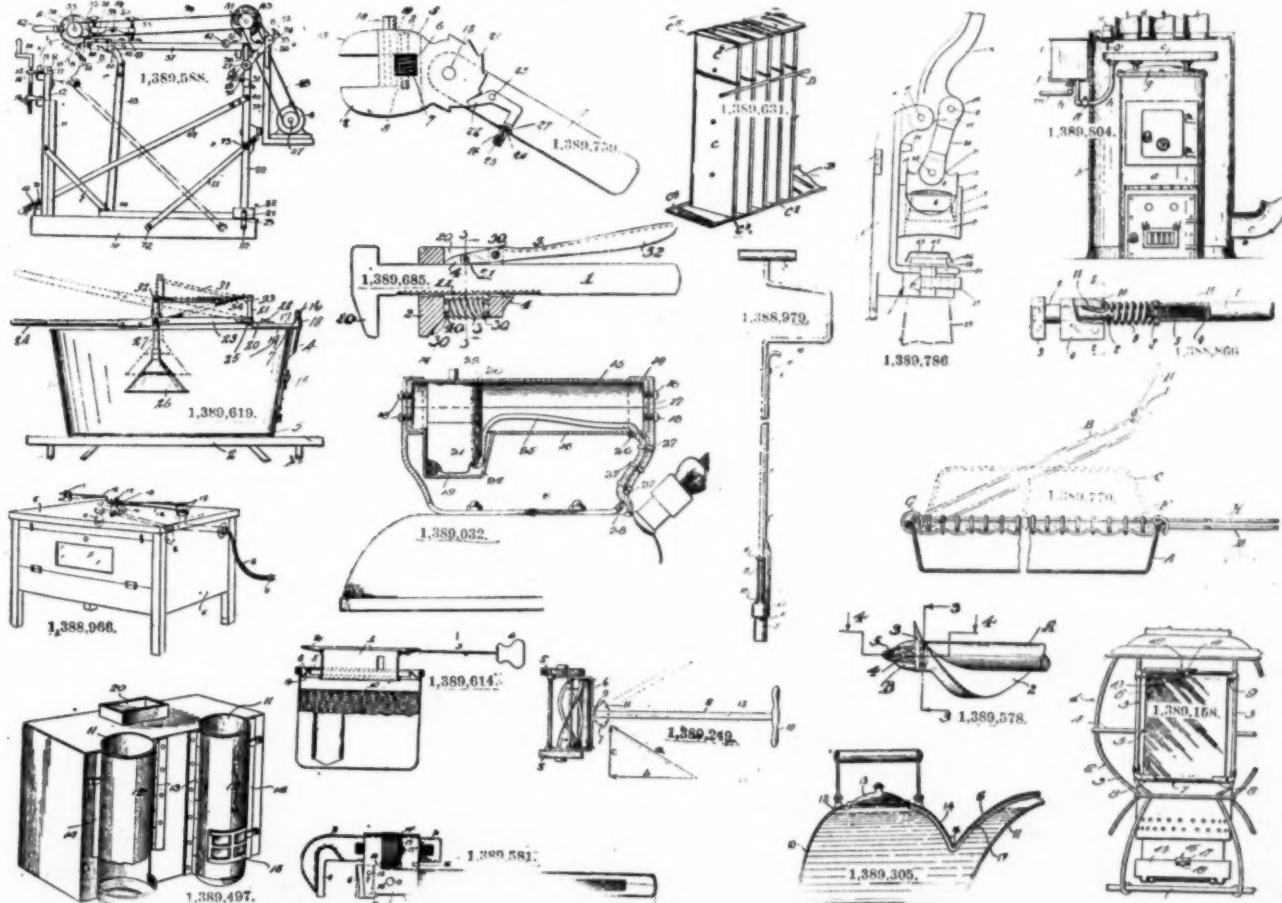
1,389,685. Wrench. Charles F. Nast, Anacortes, Wash. Filed July 19, 1920.

1,389,759. Ratchet-Wrench. Sireno E. Huff, Greeley, Colo. Filed April 13, 1920.

1,389,770. Cooking Utensil. Minnie M. May, Evansville, Ind. Filed Sept. 24, 1920.

1,389,786. Bottle-Capper. Lovell M. Rouse, Portland, Ore. Filed Sept. 24, 1919.

1,389,804. Humidizing Attachment for Hot-Air Furnaces. John O. Wrenn, Portland, Ore. Filed June 3, 1919.



Weekly Report of the Markets

General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

STEEL INDUSTRY MAINTAINS RATE OF PROGRESS.

Steel production and steel mill operations, as well as pig iron and coke output, have shown a steady increase during the week.

At the present time steel ingot production has climbed to a yearly rate of between 18,000,000 and 19,000,000 tons, as compared to 10,000,000 tons, the low point of the year, which was reached last July.

This shows a gain of between 8 and 9 per cent in about two months' time.

The bulk of the increase in steel mill schedules is confined to sheets, wire, tin plate and pipe, while bar, shape, plate and rail mills have not as yet felt the betterment in demand to any great degree.

Steel sheet bookings by the American Sheet & Tin Plate Company subsidiary of the United States Steel Corporation, last week were the largest for any single week in its history, which is most spectacular in times like these.

This company increased the rate of output at its sheet mills from 71 to 78 per cent in a single week and at present is operating at nearly 80 per cent of capacity.

The recent pickup in tin plate demand has permitted this company to boost the operating rate of its tin mills from 55 to 63 per cent of capacity in a week's time.

The independents are only a few per cent under the leading interest in mill operating schedule.

Sheet bookings, however, do not cover deliveries very far into the future and there is already some talk of another price advance.

As to export demand, Japan seems to be the most active buyer at present and the demand from this quarter is confined almost wholly to black sheets.

For the first time since July, 1920, there is a very strong likelihood that the unfilled tonnage report of the United States Steel Corporation will show an increase for the month instead of a decrease.

However it goes, September figures in all probability will not vary more than 30,000 tons either way. Steel touched the low point in output about the middle of July, and since then has shown a steady increase.

Freight rates continue to be the dominant factor against the completion of orderly deflation and without doubt is the principal factor that caused the turn of the market upon the recent revival in demand at a price average some 137 per cent above the prewar average.

The Bridge Builders and Structural Society report that after a careful investigation it finds that the freight on fabricated jobs is \$25 a ton, or 40 per cent of the average delivered price.

High wages is the cause of high freights and yet a vote of the Brotherhood of Railway Trainmen as well

as that of other railroad unions is in favor by a large majority to strike rather than accept the slight cut of only 12 per cent in wages.

Steel.

Finished steel prices took a decided turn upward during the week. For several weeks now the lighter finished steel products such as sheets, wire and pipe have been advancing in price, while the heavier items, bars, shapes and plates were recording an uninterrupted decline.

This week, however, the leading interest announced that hereafter its minimum price on bars would be 1.65 cents, and plates and shapes 1.65 cents Pittsburgh.

Although these quotations are some \$2 a ton under the last "official" prices given out by the corporation, it was generally known that it was competing more or less freely with the independents whose minimum price still stands at 1.60 cents Pittsburgh on all three items.

Hence the announcement was equivalent to an advance of some \$2 and \$3 a ton, and it is confidently expected that the independents will make similar price advances in the near future.

Already some of the independents have raised the price of sheet bars in some cases \$2 and in others \$2.50 a ton from the ruling base of \$30, but the advance is by no means general as yet.

On the other hand several manufacturers of charcoal iron tubes issued new schedules, increasing the discount 1 point, while a few chain makers led by the United States Chain & Forging Company, increased the discount on 19 chain items between 5 and 10 per cent.

Other price changes included an advance of \$2 a ton in silvery and Bessemer ferrosilicon irons by Jackson and New Strattesville, Ohio, furnaces. Bessemer ferrosilicon, 10 per cent, is now quoted at \$38.50 and silvery at \$27 for 6 per cent, and the freight to Pittsburgh is \$4.06 a ton.

Copper.

There have been several inquiries recently for both casting and electrolytic copper for shipment after the first of next year and options were taken on casting for export in December, January and February.

Speculators also have been endeavoring to buy electrolytic for shipment in the first quarter of next year but without resulting in any business as there were few sellers.

Now it is reported that other inquiries are in the market for shipment during the first quarter of next year amounting to 3,000,000 or 4,000,000 pounds, but as noted above, producers are not willing to name prices even for December shipment.

Wire manufacturers who have been very reluctant to come into the market because of light sales of wire

are now showing more interest. The Western Union Telegraph Company is also said to be in the market for 2,000,000 pounds for this year's shipment.

Probably the most encouraging feature is the better demand for wire, tubes and rolled copper and brass from domestic consumers. Some of the manufacturers of these products have tested the outside market but find so little copper available from second hands that they are buying more from producers directly.

Such purchases, however, are very conservative. Their attitude may be due to the prospect of obtaining larger supplies of foreign scrap.

Wide interest will be aroused in this country because of the report that large tonnages of the British scrap have been sold to American interests, other large sales having been made to German and Belgian interests.

In Chicago copper sheet, mill base, has advanced 1 cent per pound and is now selling at 20 $\frac{1}{4}$ cents.

Tin.

The total visible supply of tin as of September 30, amounted to 21,189 tons as compared with 19,358 tons at the end of August, and 18,996 tons at the end of September, 1920.

Shipments from the Straits during September aggregated 5,300 tons as follows: 1,870 tons to Great Britain, 430 tons to the Continent and 3,000 tons to the United States.

Consumption amounted to 4,632 tons as follows: London deliveries 1,707 tons, Holland deliveries 320 tons and deliveries in the United States 2,605 tons.

There were 25 tons shipped from Australia. Stocks at the end of the month totaled 12,415 tons as follows: England (all kinds) 6,484 tons, Holland 4,175 tons and the United States 1,756 tons.

Stocks afloat at the close of the month aggregated 8,774 tons divided as follows: London 2,190 tons, Barka & Billiton 1,084 tons, European continent 425 tons and the United States 5,075 tons.

During the week Chicago prices increased $\frac{1}{2}$ cent per pound, making pig tin now 29 $\frac{3}{4}$ cents and bar tin 31 $\frac{1}{4}$ cents per pound.

Solder.

No additional changes are recorded in Chicago prices of solder. The quotations now in effect are as follows: Warranted, 50-50, per hundred pounds, \$18.75; Commercial, 45-55, per hundred pounds, \$17.25; and Plumbers', per hundred pounds, \$16.00.

Lead.

No changes have occurred in the Chicago prices of lead. American pig lead continues at \$5.00 per hundred pounds and bar lead at \$5.75 per hundred pounds.

Zinc.

Chicago prices of zinc slabs advanced 20 points during the week, making the present quotation \$5.05 per hundred pounds.

The consuming demand continues to be good and as for some time past the purchases are principally for early shipments.

Consumers may be carrying good sized stocks at their works but they have not much to receive on contracts because the zinc is being shipped as fast as booked.

Sheets.

There are no rumors that the new prices are not being strictly adhered to, except as to one producing interest, outside the Pittsburgh Valley district. It is not actually established that this interest is not adhering strictly to the general prices.

Evidence that the market is firm is furnished by the fact that every business day orders are being placed at the full prices. One instance of particular interest is related, of a buyer who placed orders running well into four figures, supposed to cover the buyer's entire requirements for the nearby future, but who has since bought a tonnage more than one-half as large, at the \$5 advance.

There have been numerous cases in the past week of buyers approaching mills with a statement that they discovered certain items overlooked in placing the original order, and suggesting that the additional tonnage be entered at the old price.

These suggestions have not been carried out, and in most cases the buyer has placed the tonnage at the present advanced prices.

Tin Plate.

The tin plate industry is now operating at 60 to 65 per cent of capacity. Operations have increased week by week since some time in July and are now at more than double the July rate.

The increase in operations is due to two influences, depletion of stock of tin plate at mills, and heavier demand for shipments.

Of the two influences the former is somewhat the greater. Mill stocks are now fairly well liquidated except for such odd sizes as do not count for a great deal in making the market, and the bulk of the stocks is in strong hands, from which it will be fed out gently as circumstances require.

In the Chicago market, coke plates declined 70 cents per box.

Old Metals.

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, \$13.50 to \$14.00; old iron axles, \$18.50 to \$19.00; steel springs, \$13.75 to \$14.25; No. 1 wrought iron, \$12.50 to \$13.00; No. 1 cast, \$12.00 to \$12.50; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 6 $\frac{3}{4}$ cents; light brass, 4 cents; lead 3 $\frac{1}{4}$ cents; zinc, 2 cents; cast aluminum, 9 cents.

Pig Iron.

The situation in pig iron is brighter today than for many months and it is certain that sales for September will be well in excess of August so far the best month of the year. Foundry activity is on the upgrade.

Chicago reports inquiries for 1,000 tons of foundry iron, 1,000 tons of malleable, 800 tons of silvery, 800 tons of charcoal and 500 tons of Bessemer ferrosilicon.

One order for 4,000 tons of iron was placed in Pittsburgh and it is estimated that between 20,000 and 25,000 tons of iron were placed in Buffalo.

Sales of some 25,000 tons of foundry iron were made in the Philadelphia district and about 15,000 tons in Massachusetts.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.

Chicago Foundry	\$22 70
Southern Fdy. No. 2.....	25 67
Lake Sup. Charcoal.....	33 50
Malleable	22 70

FIRST QUALITY BRIGHT TIN PLATES.

	Per Box
IC 14x20 112 sheets	\$11 25
IX 14x20.....	12 25
IXX 14x20.....	13 80
IXXX 14x20.....	15 15
IXXXX 14x20.....	16 60
IC 20x28.....	22 50
IX 20x28.....	24 50
IXX 20x28.....	27 60
IXXX 20x28.....	30 30
IXXXX 20x28.....	33 20

COKE PLATES

Cokes, 180 lbs....	20x28	\$12 70
Cokes, 200 lbs....	20x28	13 00
Cokes, 214 lbs....	IC 20x28	13 35
Cokes, 270 lbs....	IX 20x28	15 55

BLUE ANNEALED SHEETS.

Base.....	per 100 lbs.	\$3 38
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ONE PASS COLD ROLLED BLACK.

No. 18-20.....	per 100 lbs.	\$3 95
No. 22-24.....	per 100 lbs.	4 00
No. 26.....	per 100 lbs.	4 05
No. 27.....	per 100 lbs.	4 10
No. 28.....	per 100 lbs.	4 15
No. 29.....	per 100 lbs.	4 25

GALVANIZED

No. 16.....	per 100 lbs.	\$4 40
No. 18-20.....	per 100 lbs.	4 55
No. 22-24.....	per 100 lbs.	4 70
No. 26.....	per 100 lbs.	4 85
No. 27.....	per 100 lbs.	5 00
No. 28.....	per 100 lbs.	5 15
No. 30.....	per 100 lbs.	5 65

BAR SOLDER.

Warranted,		
50-50.....	per 100 lbs.	\$18 75
Commercial,		
45-55.....	per 100 lbs.	17 25
Plumber's.....	per 100 lbs.	16 00

ZINC.

In Slabs.....	\$5 05
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SHEET ZINC.

Cask lots	11c
Less than cask lots.....	11 1/4-11 1/2c

COPPER.

Copper Sheet, mill base.....	\$0 20 1/4
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LEAD.

American Pig	\$5 00
Bar	5 75
Sheet.	
Full coils.....	per 100 lbs. \$7 75
Cut coils.....	per 100 lbs. 8 00

TIN.

Pig tin	29 1/2c
Bar tin	31 1/2c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR HEATER FITTINGS AND ACCESSORIES.

ADZES.

Coopers'.	
Barton's	Net
White's	Net

ALARM CLOCKS.

Big Ben and Baby Ben.....	per doz. \$28 80
America	13 56
Tattoo	28 50

AMMUNITION.

Shells, Loaded, Peters.	
Loaded with Black Powder.....	18%
Loaded with Smokeless Powder	18%

Winchester.	
Smokeless Repeater Grade.	10 & 4%
Smokeless Leader Grade.	10 & 4%
Black Powder.....	10 & 4%

U. M. C.	
Nitro Club.....	10 & 4%
Arrow	10 & 4%
New Club.....	10 & 4%

Gun Wads—per 1000.	
Winchester 7-8 gauge.....	10 & 7 1/2%
" 9-10 gauge.....	10 & 7 1/2%
" 11-28 gauge.....	10 & 7 1/2%

Powder.	Each
DuPont's Sporting, kegs.....	\$11 25
" 1/4 kegs	3 10
DuPont's Canisters, 1-lb.....	56
" kegs.....	22 00
" 1/4 kegs	5 75
" canisters	1 00
Hercules "E.C." kegs.....	22 50
Hercules "Infallible," 25 can drums	22 00
Hercules "Infallible," 10-can drums	9 00
Hercules "E.C." and "Infallible," canisters	1 00
Hercules W. A. 30 Cal. Rifle, canisters	1 25
Hercules Sharpshooter Rifle, canisters	1 25
Hercules Bullseye Revolver, canisters	1 00

ASBESTOS.

Paper up to 1/16.....	10c per lb.
Millboard 3/32 to 1/4.....	10 1/2c per lb.
Corrugated Paper (250 sq. ft.).....	\$6.50 per 100 lbs.
Rollboard	11c per lb.

AUGERS.

Boring Machine.....	40 @ 40 & 10%
Carpenter's Nut.....	50%

Hollow.	
Bonney's.....	per doz. \$30 00

Post Hole.

Iwan's Post Hole and Well	
Vaughan's, 4 to 9 in., without handles.....	per doz. \$14 00
Ship.	
Ford's	Net

AWLS.

Brad.	
No. 3 Handled.....	per doz. \$0 65
No. 1050 Handled	1 40
Patent asst'd, 1 to 4	85

Harness.

Common	per doz. \$1 05
Patent	" 1 00

Peg.

Shouldered	" 1 60
Patented	" 75

Scratch.

No. 18, socket	
Handled	per doz. \$2 50
No. 344 Goodell-Pratt, list less.....	35-40%
No. 7 Stanley.....	per doz. \$2 25

AXES.

First Quality, Single	
Bitted (unhandled), 3 to 4 lb., per doz.....	14 50
Good Quality, Single	
Bitted, same weight, per doz.	13 00

BAGS, PAPER, NAIL.

Pounds ..	10	16	20	25
Per 1000.....	\$5 00	6 50	7 50	9 00

BALANCES, SPRING.

Universal.	
Sight Spring.....	List less 25%
Straight	List less 25%

BARs, WRECKING.

V. & B. No. 12.....	\$0 45
V. & B. No. 24.....	0 75
V. & B. No. 324.....	0 80
V. & B. No. 30.....	0 85
V. & B. No. 330.....	0 90

BEATERS.

Carpet.	Per doz.
No. 7 Tinned Spring Wire.....	\$1 10
No. 8 Spring Wire Cop- pered	1 50
No. 9 Preston.....	1 75

BELLS.

Call.	
3-inch Nickered Rotary Bell, Bronzed base.....	per doz. \$5 50

Cow.	
Kentucky	32 1/2%

Door.	Per doz.
New Departure Automatic.....	Net

Rotary.

3 -in. Old Copper Bell.....	Net
3 -in. Old Copper Bell, fancy	Net
3 -in. Nickered Steel Bell.....	Net
3 1/2-in. Nickered Steel Bell.....	Net

Hand.

Hand Bell, polished.....	List plus 15-10%
White Metal.....	List plus 15-10%
Nickel Plated.....	List plus 10%
Swiss	Net

Miscellaneous.

Church and School, steel alloys	30%
Farm, lbs..	40 50 75 100
Each	\$3 00 3 75 5 50 7 25

BEVELS, TEE.

Stanley's Rosewood handle, new list	Nets
Stanley iron handle.....	Nets

BINDING CLOTH.

Zinc	55%
Brass	40%
Brass, plated	60%

BITS.

Auger.	
Jennings Pattern.....	Net
Ford Car.....	List plus 5%
Ford's Ship.....	" 5%
Irwin	35%
Russell Jennings.....	Plus 15%
Clark's Expansive.....	33 1/2%
Steer's " Small list, \$22 00.....	5%
" " Large "	\$26 00.....5%
Irwin Car.....	35%
Ford's Ship Auger pattern Car	List plus 5%
Center	10%

Countersink.

No. 18 Wheeler's.....	per doz. \$2 25
No. 20	" 3 00
American Snailhead	1 75
" Rose	2 00
" Flat	1 40
Mahew's Flat	1 60
" Snail	1 90

Dowel.

Russell Jennings.....	plus 20%
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Gimlet.

Standard Double Cut Gross	\$8 40
Nail Metal Single Cut	Gross \$4 00—\$5 00

Reamer.

Standard Square.....	Dow. \$2 50
American Octagon.....	" 2 50

Screw Driver.

No. 1 Common.....	Each 18c
No. 26 Stanley.....	Each 79c

BLADES, SAW.

Wood.	
Atkins 30-in.	
Nos.	6 40 28
	\$8 90 \$9 45 \$5 40
Disston 30-in.	
Nos.	6 68 28
	\$9 45 \$10 05 \$9 45

BLOCKS.

Wooden	20%
Patent	20%

BOARDS.

Stove.	Per doz.
26x26, wood lined.....	\$14 45
28x28, "	16 95
30x30, "	19 00
26x26, paper lined.....	\$ 8 15
28x28, "	9 10
30x30, "	10 30

Wash.

No. 760, Banner Globe (single)	per doz. \$5 25
No. 652, Banner Globe (single)	per doz. 6 75
No. 801, Brass King, per doz. 8 25	
No. 860, Single—Plain Pump	6 25

BOLTS.

Carriage, Machine, etc.	
Carriage, cut thread, 1/2x6 and sizes smaller and shorter	60%
Carriage sizes larger and longer than 1/2x6.....	50-10%
Machine, 1/2x4 and sizes smaller and shorter.....	60-10%
Machine, sizes larger and longer than 1/2x4.....	50-10-5%
Stove	70-10%

Mortise, Door.

Gem, iron	5%
Gem, bronze plated.....	5%

Barrel.

Cast	Net
Wrought	"
Wrought, bronzed.....	"

Flush.			
Wrought	.....	Net	
Spring.			
Wrought	.....	"
Wrought, heavy	.....	"
Square.			
Wrought	.....	"

BOXES.			
Mail. No. 2	4	10	
Per doz.	\$18 00	\$23 00	\$29 00
Mitre.			
Stanley's	.....	Net Price	
Stearns, No. 2	per doz.	\$48 00	

BRACES, RATCHET.			
Goodell-Pratt No. 408	.....	\$4 60	
" " No. 410	.....	4 80	
" " No. 412	.....	5 00	
V. & B. No. 444 8 in.	.....	4 65	
V. & B. No. 333 8 in.	.....	4 30	
V. & B. No. 222 8 in.	.....	4 00	
V. & B. No. 111 8 in.	.....	3 50	
V. & B. No. 11 8 in.	.....	3 05	

BURRS, RIVETING.			
Copper Burrs only	..30% above list		
Tinners' Iron Burrs only	.....	Net	

BUTTS.			
Steel, antique copper or dull brass finish—case lots—			
3 1/2 x 3 1/2	per dozen pairs	\$2 75	
4 x 4	"	3 80	
Heavy Bevel steel inside sets, case lots—			
.....	per dozen sets	7 50	
Steel bit keyed front door sets, each	.....	1 80	
Wrought brass bit keyed front door sets, each	.....	3 35	
Cylinder front door sets, each	.....	7 00	

CALIPERS.			
Double	.....	Net	
Inside and Outside	.....	"
Wing	.....	"

CANS.			
Milk.			
Ohio.			
Gals. 5	8	10	
Each	\$3 65	\$4 45	\$4 70
Gem.			
Gals. 5	8	10	
Each	\$3 85	\$4 95	\$5 20
Jersey or Holstein.			
Gals. 5	8	10	
Each	\$4 15	\$5 60	\$5 90

CAN OPENERS.			
See openers.			

CARRIERS.			
Hay.			
Diamond, Regular	each, Nets		
Diamond, Sling	.....	"

CARTRIDGES.			
See Ammunition.			

CASTERS.			
Standard—Ball Bearing.			
.....	50 & 10%		
Bed			
.....	40%		

Common Plate.			
Brass Wheel	.....	15%	
Iron and porcelain wheels, new list	.....	50%	
Philadelphia Plate, new list	.....	50%	
Martin's	.....	40%	

CATCHERS, GRASS.			
No. 160S	per doz.	\$12 25	
No. 165S	"	14 01	

CEMENT, FURNACE.			
American Seal, 5 lb. cans, net	\$0 45		
" " 10 lb. cans, "	90		
" " 25 lb. cans, "	1 87		
Asbestos, 5 lb. cans	45		
Pecora, 5 lb. cans	45		
" 10 lb. cans	90		
" 25 lb. cans	1 87		

CHAINS.			
Breast Chains.			
With Slide	doz. pairs	\$5 50	
Without Slide	"	5 00	
Doubleslack	"	9 35	
With Covert Snaps	"	6 35	

Picture Chains.			
Light brass, 3 ft.	per doz.	1 25	
Heavy brass, 3 ft.	"	1 75	

Sash Chain. (Morton's)			
Steel, per 100 ft.			
0	.....	\$2 50	
2	.....	3 10	
1	.....	3 60	

Champion Metal.			
0R	.....	5 40	
2R	.....	5 60	
1R	.....	7 75	
Champion Metal—Extra Heavy.			
1H	.....	\$9 50	

Cable Sash Chains.			
Steel	.....	List Net Plus 15%	

CHALK, CARPENTERS'.			
Blue	.....	per doz.	\$2 00
Red	.....	"	2 00
White	.....	"	1 80
Common White School	.....	"	0 30
Crayon	.....	"	0 30

CHIMNEY TOPS.			
In bags	.....	per bag	\$1 80

CHECKS, DOOR.			
Corbin	.....	Net list	
Russwin	.....	Net list	

CHISELS.			
Cold.			
Good quality, 1/2 in.	each	\$0 44	
1/4 in.	"	0 28	

Diamond Point.			
V. & B. No. 15, 1/4 in.	.....	0 23	
V. & B. No. 15, 1/2 in.	.....	0 48	

FIRMER BEVELLED.			
Berg's (Swedish).			
1/2 in.	per doz.	\$ 4 45	
1 1/2 in.	"	7 15	
1 3/4 in.	"	10 15	
2 in.	"	17 15	
2 1/2 in.	"	24 95	

Round Nose.			
V. & B. No. 65, 1/4 in.	.....	0 33	
V. & B. No. 65, 1/2 in.	.....	0 44	

SOCKET FIRMER.			
Berg's (Swedish).			
1/2 in.	per doz.	\$11 95	
1 in.	"	16 75	
1 1/2 in.	"	23 95	
2 in.	"	35 95	

Cape.			
V. & B. No. 50, 1/4 in.	.....	0 29	
V. & B. No. 50, 1/2 in.	.....	0 64	

CHUCKS, DRILL.			
Goodell's, for Goodell's Screw Drivers	.....	List less 35-40%	
Yankee, for Yankee Screw Drivers	.....	\$6 00	

CHURNS.			
Anti-Bent Wood.			
Gal.	.....	5 7 10	
Each	\$3 00	4 60 4 85	
Belle, Barrel	.....	65 & 7 1/2	
Common Dash,			
Gal.	.....	5 7	
Per doz.	\$17 00	19 00	

CLAMPS.			
Adjustable.			
Martin's	.....	20%	
No. 63, Screw	.....	20%	

Cabinet.			
Screw	.....	20%	

Carpenters'.			
Steel Bar	.....	List price plus 20%	

Carriage Makers'.			
2 1/2 in.	per doz.	\$ 7 00	
5 in.	"	14 00	
8 in.	"	25 00	
12 in.	"	42 00	

Quilt Frame.			
No. 30, Ball and Socket,			
2 1/2 in. head	per gross	\$13 00	
No. 50 Ball and Socket,			
3 1/2 in. head	per gross	14 50	

Hose.			
Sherman's, brass, 1/4 in.	per doz.	\$0 48	
Double, brass, 1/4 in.	per doz.	1 20	

Saw Filers.			
Wentworth's, No. 1,	\$12.50;	No. 2,	\$18.25;
No. 3,	\$16.25.		

CLAWS, TACK.			
Wood hdl. No. 10	per doz.	\$1 15	
Forged steel, wood hdl.	"	2 15	
Solid steel	"	3 25	
Giant	"	50	

CLEAVERS.			
Family.			
Beatty's,	inch	7 8 9 10	
Per doz.	\$27 00	29 00 33 00 36 00	

CLEAVISES.			
Malleable	.....	10c lb.	

CLIPPERS.			
Bolt (Carolus).			
No. 0	.....	\$2 50	
No. 1	.....	3 25	
No. 3	.....	4 25	

CLIPS.			
Axle	.....	.65 @ 5%	

Damper.			
Standard	per doz.	70c	
Troy	"	38c	
Hame	"	50c	

COLLARS, STOVE PIPE.			
Lacquered.			
Inches	5 6 7		
Fancy pattern,			
per doz.	.65c 75c	\$1 00	

COMPASSES.			
Carpenters'	.....	15%	

COPPERS—Soldering.			
Pointed Roofing.			
3 lb. and heavier	per lb.	40c	
2 lb.	"	48c	
2 1/2 lb.	"	45c	
1 1/2 lb.	"	55c	
1 lb.	"	60c	

CORD.			
Picture.			
White Wire	.....	.60 & 5%	
Sash.			
Spot, No. 7	per lb.	65c	
No. 8	"	60c	

COTTERS, SPRING.			
All sizes	.....	.37 1/2 %	

COUPLINGS, ROSE.			
Brass	per doz.	\$2 25	

CRADLES, GRAIN.			
Morgan's Grapevine	per doz.	\$45 00	

CUT-OFFS.			
Standard gauge	.....	35%	
26 gauge	.....	20%	

CUTTERS.			
Glass.			
Red Devil	.....	Net	

Ment.			
Enterprise—Nos. 5 10 12			
Each	\$2 50	\$4 25	\$3 75
Nos. 22 23			
Each	\$6 50	\$8 50	

Pipe.			
Saunders, Nos. 1 2 3			
Each	\$1 85	2 75	6 75

Slaw and Kraut.			
Per doz.			
4-knife Kraut	.....	\$20 00-55 00	
3-knife Kraut,			
8x27 in.	.....	13 00-18 00	
1-knife Slaw	.....	2 50	
2-knife Slaw	.....	3 00	

Washer			
.....	11 00		

DAMPERS, STOVE PIPE.			
Diamond.			
6-inch	per doz.	\$1 50	

DIGGERS.			
Post Hole.			
Eureka	per doz.	\$14 50	
Iwan's Split Handle (Eureka)			
4-ft. Handle	per doz.	15 00	
7-ft. Handle	per doz.	20 00	
Iwan's Hercules pattern,			
per doz.	18 00		

GALVANIZED WARE.		HANDLES.		Screw Hook and Strap.		KETTLES.		
Pails (Competition), 8-qt.	Per doz. \$2 00	Agricultural Tool.		6 to 12 in.	per 100 lbs. \$7 75	Brass	15%	
10-qt.	2 35	4 1/2-inch, plain	per doz. \$3 50	14 to 20 in.	" " 7 50	Cauldron	40&5%	
12-qt.	2 50	Auger.		22 to 36 in.	" " 7 25	Copper	per lb. 27	
14-qt.	2 80	Common Assorted, per doz.	\$0 75	Screw Hook and Eye.		Maslin	40&10%	
Wash tubs, No. 1.	6 50	Pratt's Adjustable, Nos.		1/2 in.	per doz. pair \$2 00	Sugar	50%	
No. 2.	7 50	1 & 2, per doz.	6 00	3/4 in.	" " 3 50	KNIVES.		
No. 3.	8 50	Ives' Adjustable..per set	1 35	1 in.	" " 5 00	Beet Topping.		
GARAGE DOOR HARDWARE.		Axe.		HOES.		Clyde, 9-in. Scimitar Blade,	25%	
Stanley	All net	Hickory, No. 1....per doz.	4 00	Garden	Net	California	25%	
GAUGES.		Hickory, No. 2....	2 50	HOOKS.		Butcher.		
Cream Pail.		Assorted	per doz. 55c	Awning, No. 60.....	Net	Beechwood Handles, 6-inch	25%	
Fairmount	per doz. \$3 75	Hickory, Socket Firmer,		Belt.		Beechwood Handles, 7-inch	25%	
Marking, Mortise, etc.....	Nets	Assorted	per doz. 70c	Brown's	70&5%	Beechwood Handles, 8-inch	25%	
Wire.		Coal Pick.....	40%	Jones'	65&5%	Cooper's Hoop	25%	
Disston's	25%	Drifting Pick.....	40%	Box.		Corn.		
GIMLETS.		File, assorted.....	per doz. 30c	No.	8 10 12	Clipper	25%	
Discount.....	65% and 10%	Hammer and Hatchet.		Each	\$0 29 0 77 0 86	Disston's No. 2.....	25%	
GLASS.		No. 1, per doz.....	\$0 80	Bush.		Earle's	25%	
Single Strength, A and B,		Second growth hickory, per	doz. 1 40	Common Axe Handle,		Woodford	25%	
all sizes.....	81%	Hay and Manure Fork, Han-		per doz.....	\$20 00	Drawing.		
Double Strength, A and B,		dies, Strap and Ferrule...	per doz. \$7 00	Chain.		Standard	25%	
all sizes.....	83%	Screw Driver.		Inch.. 1/4 5/16 3/8 7/16 1/2		Adjustable	25%	
GLOVES.		Assorted	each 6c	Pr. 100	\$7 60-8 10 9 75 11 50 12 60	Barton's Carpenters'	25%	
6-oz. knit wrist gloves.....	\$1 00	Shovel and Spade.....	Net	Clothes Line.		Hay.		
8-oz. knit wrist gloves.....	1 20	Door.		Japanned	per doz. 35c@1 00	Iwan's Solid Socket.....	25%	
10-oz. knit wrist gloves.....	1 45	Matchless	Net	Galvanized	65c@2 25	Heath's	25%	
GLUE.		Reliable	Net	Conductor.		Iwan's, Sickle Edge.....	25%	
Bulk.		Richards	25%	Conductor hooks.....	20-10%	Iwan's Imp'd Serrated.....	25%	
B Amber.....per lb.	35c	Garage Door.		Milcor	Net	Hedge.		
A white.....	40c	(See Garage Door Hdw.)		Corn.		Challenge	25%	
H. S. Amber.....	32c	Conductor Pipe.		Common, riveted, red, per dz.	Net	Disston's No. 1.....	25%	
Liquid.		Iwan's Perfection.....	50%	Little Giant.....	" "	Mining.		
Army & Navy.....	40%	Milcor Perfection.....	Net	Grass.		Common, Single	25%	
Le Page's—		Eaves Trough.		Common Nos. 1 3 5 7		Common, Double	25%	
List "A".....	37 1/2%	Steel hangers.....	30%	Per doz.. \$4 25 3 25 3 40 3 50		Streeter, 4-blade	25%	
List "B".....	35%	Triple twist wire.....	10%	Hammock.		Streeter, 6-blade	25%	
List "C".....	25%	Milcor Eclipse.....	Net	With plate.....per doz.	\$1 00	Putty.		
GREASE, AXLE.		Milcor Triplex.....	Net	With screw.....	95	Common	25%	
Wood Boxes.		Milcor Milwaukee.....	Net	Picture	50%&50%&10%	Landers	25%	
Frazer's.....per gro.	\$13 00	HASPS.		Potato and Manure.....	Nets	Scrapping.		
Hub Lightning.....	7 50	Hinge, Wrought, with staples.	Net	Knobs.		Beech Handle	25%	
Wood Pails.		HATCHETS.		Door.		Landers	25%	
Frazer's, 15 lb. \$1.00; 25 lb. \$1.50		Size No. 2 extra quality	Per doz. \$19 00	Mineral	per doz. \$2 00	Lanterns.		
each.		Competitive Grade.....	13 00 up	Porcelain	" 2 00	Monarch tin, hot blast.....	\$9 50	
Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.		No. 2 Warranted Shingling	14 25	Jet	2 00	Dietz No. 2 cold blast.....	14 50	
GRINDSTONES.		Competitive Forged.....	9 75	HOSE.		Best tubular	9 50	
Family.		HAY RACK BRACKETS.		1/2-inch molded reel.....	15c	Competition lanterns No. 0	7 80	
Inches	7 8 10 12	Wenzleman's No. 1		3/4-inch 3 ply duck.....	15c	tubular		
Prices on application.		per doz. sets \$18 00		1/2-inch 4 ply duck.....	17 1/2c	LEATHER, LACE.		
Mounted.		Wenzleman's No. 2		1/2-inch 5 ply multiple.....	13c	Rawhide 1/2-inch	100 ft. \$2 60	
Ball Bearing... 1 2 3		per doz. sets 19 20		HUSKERS.		1/2-inch	4 40	
Prices on application.		Blind.		Nos.	B E	LEATHERS, PUMP.		
GUNS.		Clark's Gravity		Per doz.	New Nets	Valve and Plunger.....	Net	
Iver Johnson Champion Single		No. 1.....per set	45c	No. 59.....per doz.	New Nets	LEVELS.		
Barrel Shot Guns.....	Net	No. 2.....	88c	Plane.		Disston, No. 28 Asst.....	\$22 05	
Double Barrel, Hammerless...	"	Gate.		Wood Bench...Add 10% to list		" No. 13, 20 in. each	1 83	
HAFES, AWL.		Clarks..... 1 2 3		IRONS.		" No. 22, 24 in. each	2 40	
Brad.		Hgs & Litch, ea. 85c 1 10 2 40		Charcoal	per doz. \$11.00	" Shafting, 6 in.	19 80	
Common	per doz. \$0 35	Hinges only—		Common, polished, per	100 lbs. 7 75	" 6 in. gr. glass	24 20	
Patent, plain top.		Upper	\$1 25	No. 70 Asbestos.....	\$1 50 net	" No. 1 Asst.....	5 75	
Patent, leather top	80	Lower	1 55	No. 100	1 75 net	" No. 9 Asst.....	12 40	
Sewing.		Latches only—		Common, nickel plated....	8 25	" 24-26 in. each	1 03	
Common	24	No. 1.....each	28c	Mrs. Pott's,		" 28-30 in. each	1 09	
Patent	55	No. 2.....	28c	No. 50 J, Enterprise, per set	Nets	LIFTERS.		
HAMMERS, HANDLED.		Screen Door.		No. 55 J,	" "	Stove Cover.		
Each, net		1751—3x3	doz. \$2 00	No. 50 T,	" "	Coppered	per gro. \$6 00	
Blacksmiths, Hand, No. 0,		1753—2 1/2x2 1/2	1 95	No. 55 T,	" "	Alaska	4 75	
26 oz.	\$1 25	Spring.		JACKS.		Transom.		
Engineers', No. 1, 26 oz.	1 35	Chicago	Add 10% to list	Richard's No. 1..per doz.	\$15 50	Payson's	55%	
Farriers', No. 7, 7 oz.	1 41	Gem	25%	Oliver,		LINES.		
Machinists', No. 1, 7 oz.	1 06	Matchless	40%	Each	\$0 60 \$0 80	Jute	per lb. 25c	
Nail.		New Idea.....per gross	\$6 90	Standard,		Sisal	35c	
Vanadium, No. 41 1/2, 16 oz.		Wrought Iron.		No.	1 2	Cotton	25c	
each	1 56	Per 100 pairs with screws:		Each	\$0 60 \$1 00	Braided Cotton.....	52c	
V. & B., No. 11 1/2, 16 oz.		Light Strap Hinges, No. 3	\$12 00	Big Lift.....	40%			
each	1 13	Heavy Strap Hinges, No. 4	15 75	Tiger.....	40%			
Garden City, No. 11 1/2, 16 oz., each	94	Light T Hinges...No. 3	12 10					
Tinner's Riveting, No. 1, 8 oz., each		Heavy T Hinges...No. 4	20 00					
	80	Extra Heavy T Hinges,						
Shoe, Steel, No. 1, 13 oz., each		No. 4	21 50					
	73							
Tack.								
Magnetic.								
No. 5, each.....	1 00							
HAMMERS, HEAVY.								
Farriers'	20%							
Masons'.								
Single and Double Face.....	50%							

LINING, STOVE.

Bricksper crate 42c

LOCKS.Barn Door.
No. 60 Stearns...per doz. \$12 00
No. 80 " " " 24 00**MACHINES.**Riveting.
Stearns No. 1...per doz. \$16 00**Tenoning.**

No. 50 Peace's Spoke, each \$16 00

MAIL BOXES.

See Boxes.

MALLETS.**Carpenters'.**Fibre Head, No. 2 per doz. \$16 50
" No. 3 " 19 50
" No. 4 " 28 50

Round Hickoryper doz. \$3 00—5 00

Round Lig-
numvitae " 6 25—10 50

Square Hickory " 3 50—5 50

Square Lig-
numvitae " 8 00—12 00**Tinners'.**

Hickoryper doz. \$2 25

MATS.Door.
National Rigid.....5&10&5%
Acme Steel Flexible.....50%**MAULS.**Wood Choppers'.
Lake Superior & Oregon
pat.40&5%**MEASURES.**Galvanized, doz.....Nets
Japanned, doz.....Nets**MITRES.**Galvanized steel mitres, end
caps, end pieces, outlets....30%
MilcorNet**MOPS.**Cotton. Star (Cut Ends).
Pounds 12' 15' 18' 24'-3-oz.
Per doz. \$4 50 5 65 6 75 9 00
Enterprise16%
Parker50&5%**NAILS.**

Cut Steel.....\$4 25

Cut Iron.....4 45

Wire.
Commor.3 75Cement Coated,
Small Lots.....4 20Horseshoe.
Ausable55&5%
Capewell15%
Perfect55&5%
Putnam20&5%
Star30&5%Picture.
Brass Heads.....25%Brads50&5%
FurnitureList plus 15%**NAIL PULLERS.**

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.Galvanized before weaving....50%
Galvanized after weaving....40%**NIPPERS.****End Cutting.**Berg's (Swedish) In. 5 6
Per dozen.....\$12 60 15 20**End and Diagonal Cutting.**Berg's (Swedish) In. 5 6
Per dozen.....\$10 05 13 00**Hoof.**Heller's40&10%
V. & B., No. 52, each.....\$2 25**NOZZLES.****Hose.**Magicper doz. \$9 50
Diamond6 75**NUTS, HOT PRESSED.****Square Tapped.**

\$2.41 off per 100 lbs.

Hexagon Tapped.

\$2.41 off per 100 lbs.

OILERS.**Chase Pattern.**Brass and Copper.....10%
Zinc20%**Railroad.**

Coppered33½%

Steel.

Copper Plated50-10-5%

OPENERS.**Can.**Delmonicoper doz. \$1 30
Never Slip....." 65**Crate.**

V. & B....per doz. \$7 25-11 00

OUTFITS, COBBLING.Combinationper doz. \$16 00
Economy8 50
Family14 50**PAIS.****Cream.**14-qt. without gauge
.....per doz. \$9 5018-qt. without gauge,
.....per doz. 11 0020-qt. without gauge,
.....per doz. 11 75**Sap.**10-qt., IC Tin...per doz. \$4 00
12 " " " " 5 50**Stock.**Galv. qts. 14 16 18 20
Per doz. \$9 75 10 75 12 75 14 50**Water.**Galvanized qts. 10 12 14
Per doz. \$5 75 6 50 7 25**Wood.**

Cable, 2-Hoop...per doz. Nets

Cable, 3-Hoop... " Nets

Cedar, 3-Hoop, brass " Nets

PANS.

DrippingNet

Fry.

CommonNets

Acme"

Roasting.Paxton,
Nos.1 2 3 4

Per doz.Nets

Neverburn"

Savory, No. 200...per doz. \$8 40

PAPER.**Roofing.**

Major, 1-plyper square. \$1 23

" 2-ply2 24

" 3-ply2 65

Red Rosin.....per ton \$111 45

Sand and Emery.

No. 1 per ream, best grade \$5 40

No. 1, per ream, cheaper
grade4 35**PARERS.****Apple.**Goodell'sper doz. \$10 80
Turntable11 40
White Mountain " 8 40
Reading No. 78 " 11 40**Potato.**Goodell's Saratoga, 10½
in., doz.6 50
Goodell's Saratoga, 5 in.,
doz.5 50**PICKS.**Adze Eye Ore.....22½%
Drifting and Poll Picks.....22½%
Plumbs, Railroad22½%
Surface22½%**PINCERS.**Carpenters', cast steel,
No.6 8 10 12
Each \$0 56 \$0 72 \$0 93 \$1 03
Blacksmiths', No. 10.....\$0 96
Heller'sList plus 10%**PINS.**Clothes.
Common, per box of 5 gro. \$0 95**Picket.**Fluted, 15-in.....per doz. \$1 10
Fluted, 21-in....." 1 60
Spiral1 90**PIPE.****Conductor.**Plain Round and Round Corru-
gated.29 Gauge55%
28 "45%
26 "35%
24 "10%Square Corrugated A and B and
Octagon.29 Gauge40%
28 "40%
26 "30%
24 "10%Galvanized Toncan Metal, Genu-
ine O. H. Iron, Lyonmore
Metal, Charcoal Iron and Key-
stone C. B.Plain Round and Round Corru-
gated.29 Gauge40%
26 "35%
24 "10%Square Corrugated A and B
Polygon and Octagon.29 Gauge40%
26 "30%
24 "10%
14 and 16-oz. Copper, all de-
signs10%

Milcor, all styles and gauges..Net

Standard Gauge.

Crated and nested.....60-25%

Crated, not nested.....60-20%

Portico Elbows.Standard Gauge Conductor Pipe,
plain or corrugated.

Not Nested60 & 10%

Nested solid60 & 15%

Stove.26 gauge, 5 inch E. C.
nested\$14 5026 gauge, 6 inch E. C.
nested15 5026 gauge, 7 inch E. C.
nested17 5028 gauge, 5 inch E. C.
nested12 5028 gauge, 6 inch E. C.
nested13 5028 gauge, 7 inch E. C.
nested15 5030 gauge, 5 inch E. C.
nested11 0030 gauge, 6 inch E. C.
nested12 0030 gauge, 7 inch E. C.
nested14 00

T-Joint Made up.

6-inchper 100 \$40 00

Furnace Pipe.Double Wall Pipe and Fit-
tings40%Single Wall Pipe, Round
Pipe Fittings40%Galvanized and Back Iron
Pipe, Shoes, etc.....40%

Milcor, galvanized.....Net

PLANES.

Stanley Iron Bench.....Net

PLIERS.

V. & B. No. 6.....each \$0 57

" No. 7 Gas.....0 60

" Double Duty 106.. 0 56

" Nut No. 3.....0 64

Lineman's Side Cutting.Berg's
(Swedish), In. 6 7 8
Blk. Pol. Face,
doz.\$10 70 20 00 23 35**Long Nose Side Cutting.**Berg's (Swedish) In. 5 6
Blk. Pol. Face, doz. \$12 25 15 20**Flat and Round Nose.**Berg's (Swedish)
Flat, In. 4 6 8
Blk. Pol. Face,
doz.\$5 90 13 35 19 65Berg's (Swedish)
Round, In. 4 6 8Blk. Pol. Face
Dov.\$11 15 16 30 23 35**POINTS, GLAZIERS.**

No. 1, 2 and 3.....per doz. 75c

POINTERS, SPOKE.

Stearns' No. 1.....per doz. \$10 00

" No. 2....." 13 00

POKERS, STOVE.Wrt Steel, str't or bent,
.....per doz. \$0 75

Nickel Plated, coil han's " 1 10

POLISH.

Metal. Per doz.

Black Silk No. 60—6 oz. ...\$ 1 50

Black Silk No. 70—1 pt. ...3 00

Black Silk No. 80—1 qt. ...5 00

Black Silk No. 90—1 gal. ...12 00

Stove.Black Silk No. 5 paste, 5
oz. can\$ 1 20Black Silk No. 10 paste,
½ lb. can.....2 00Black Silk No. 10A paste,
(fireproof), 1½ lb. can.. 1 50Black Silk No. 15 paste, 1
lb. can3 00Black Silk No. 20 paste,
5 lb. can.....11 40Black Silk No. 6 liquid, 6
oz. can1 35Black Silk No. 8 liquid,
½ pt. can.....2 00Black Silk No. 12 liquid,
1 pt. can.....3 00**PRESSES, FRUIT AND JELLY**

Enterprise Manufacturing Co. 25%

PRUNERS.

Disston's Pole.....per doz. \$18 00

Water's Improved, per doz. 60%

PULLERS.Cork.
Daisyeach \$3 10

Phoenix1 40

Quick and Easy...." 2 70

Nail.
Giantper doz. \$14 50

Never-Slip17 00

PULLEYS.

Awning—Jap'd10%

Clothes Line10%

Hay Fork.

Iron Wheel, 5-in...per doz. \$2 50

Wood Wheel, 6-in. " 2 65

Wood Wheel, 6-in.,
pass knot3 00**Sash.**

CommonNet

Common-Sense, 2-in.....Net

Empire Pattern, 2-in.....Net

IdealNet

SteelNet

PUMPS.Spray.
Midget Junior...per doz. \$3 75

New Misty4 00

Crescent6 50

PUNCHES.Conductors.
No. 22.....per doz. \$3 00

Machineper lb. 25

Saddlers'.

Common...per doz. \$1 50 to \$5 00

Revolving Spring.

Stearns, No. 10...per doz. \$ 8 00

" No. 40.. " 16 00

" No. 60.. " 19 00

Parker Metal Punch No.
OXeach \$7 00Whitney's Ball-bearing...
.....Prices on application

PUTTY.		SAWS.		SETS.		SNAPS, HARNESS.	
Commercial Putty, 100-lb. kits .....\$4 75		Butchers' No. 2, 14-in. ....\$12 20		Nail Square head. ....per doz. 1 84		Covered Spring .....Add 30%	
		" No. 2, 18-in. 13 70		Cup point, knurled " 1 78		Judd's Pattern Add 33 1-6% to list	
RAIL.		" No. 2, 22-in. 15 25		Rivet.		SNATHS.	
Barn Door.		" No. 7, 16-in. 15 20		Farmers' .....per doz. 2 50		Double Ring, Bush. ....per doz. \$9 75	
Matchless, 1-in. 5c		" No. 7, 20-in. 17 30		Tinnners' 3-4 5 75		Patent Loop, Bush. " 10 00	
Matchless, 1 1/4-in. 7c		" No. 7, 28-in. 21 40		00-0 8 75		Patent Loop, Grass. " 8 75	
Storm King 5c		Disston's No. 2, 14-in. 18 20		Saw.			
Sliding Door.		" No. 2, 18-in. 19 50		Atkins No. 10 .....per doz. \$3 80		SNIPS, TINNERS'.	
Bronzed wrought iron,		" No. 2, 22-in. 20 85		" No. 12 6 20		Clover Leaf .....40&10%	
..... per ft. 3 1/4 c		" No. 7, 16-in. 20 00		Disston's Monarch " 9 90		National .....40&10%	
		" No. 7, 20-in. 21 35		Disston's Monarch No. 12 13 20		Star .....50%	
		" No. 7, 24-in. 23 35		Leach's 80		Milcor .....Net	
		" No. 7, 28-in. 26 00		Nash's Hand 3 15		SPRINGS, DOOR.	
				Nash's X-cut 4 20		Perfect.	
				Stillman's Lever. 1 30		Nos. 2 3 4 5 6 7	
				Stillman's X-cut. 2 50		Per doz. 55c 60c 65c 75c 80c 1 00	
				Whiting Pattern, " 7 50		Reliance.	
				No. 21 7 50		Light Medium Heavy	
				Eccentric Anvil, Hand No. 395, N. P. Morrill Pat- tern 14 50		Per doz. \$1 55 2 10 3 20	
						Torrey's .....per doz. 1 65	
				SHARPENERS, SKATE.		SPRINKLERS, LAWN.	
				Diamond .....per doz. \$1 60		Stearns' No. 1 ....per doz. \$11 50	
				Perfect 1 20		SQUARES.	
				SHEARS		Steel and Iron .....Net	
				Per Doz.		(Add for bluing, \$3.00 per doz. net)	
				Nickel Plated, Straight, 6" \$12 90		Mitre	
				" " " 7" 14 85		Try	
				" " " 8" 16 30		Try and Bevel..... "	
				Japanned, Straight 11 00		Try and Miter..... "	
				" " " 7" 12 40		Fox's .....per doz. \$6 00	
				" " " 8" 13 80		Winterbottom's .....10%	
				SHEAVES, SLIDING DOOR.		SQUEEZERS, LEMON.	
				Common.		Common Wood .....per doz. \$0 70	
				Inches 3 4 5		Porcelain Lined, Wood " 1 25	
				Per set .....\$1 40 1 75 2 40		Boss, malleable iron " 1 20	
				Hatfield's.		Iron frame porc'n bowl 1 90	
				Per set \$1 80 2 10 2 75 25		Iron frame, glass bowl 2 35	
				SHELLERS, CORN.		Little Giant, tin'd iron 4 00	
				Union .....per doz. \$6 75		Drum, japanned 3 80	
				SHIELDS.		Drum, nickel plated 4 50	
				Expansion Bolt Shields .....60%			
				SHINGLES.		STAPLES.	
				Per Square		Blind.	
				Zinc (Illinois) \$15 00		Barbed .....per lb. 21 @ 22c	
				SHOES.		Butter, Tub " 16 @ 19c	
				Conductor .....60%		Fence—	
				SHOT—See Ammunition.		Polished per 100 lbs. \$5 45	
				SHOVELS AND SPADES.		Galvanized 6 15	
				Coal.		Netting.	
				Hubbard's		Galvanized per 100 lbs. 6 50	
				No. A B C D		Wrought.	
				1 \$16 00 15 10 14 45 13 70		Wrought Staples, Hasps and	
				2 16 35 15 60 14 85 14 10		Staples, Hasps, Hooks and	
				3 16 75 16 00 16 25 14 45		Staples, and Hooks and	
				4 17 10 16 35 16 60 14 85		Staples .....50&10%	
				Post Drains & Ditching.		Extra heavy .....35%	
				Hubbard's		STEELYARD.	
				Size		Discount 25%.	
				14" 17 15 16 40 15 65		STONES.	
				16" 17 50 16 75 16 00		Axe.	
				18" 17 85 17 10 16 85		Hindustan per lb. New Nets	
				20" 18 20 17 45 16 70		More Grit "	
				22" 18 55 17 80 17 05		Washita "	
				Snow.		Emery.	
				Hubbard Special .....\$10 00		No. 126 .....per doz. New Nets	
				Long Handle 11 00		Oil—Mounted.	
				Sidewalk Scraper 6 50		Arkansas Hard	
				Alaska Steel.		No. 7 .....per doz. New Nets	
				D-Handle .....per doz. \$3 50		Arkansas Soft " "	
				Long Handle 3 00		Washita No. 717 " "	
				SINKS.		Oil—Unmounted.	
				Cast Iron.		Arkansas Hard per lb. New Nets	
				Painted, 16x24 .....Net		Arkansas Soft. " "	
				Enameled, White, 16x24... "		Lilly White. " "	
				Wrought Steel.		Queer Creek. " "	
				Painted, 16x24 "		Washita " "	
				SKATES.		Seythe.	
				Per pair		Black Diamond per gro. New Nets	
				Key Clamp Rocker, Men's		Crescent "	
				and Boys' — best steel		Green Mountain " "	
				runners, bright finish...\$0 91		LaMolle " "	
				Same—nickel plated finish 1 18		Extra Quinne-	
				Key Clamp Hockey, Men's		bog "	
				and Boys'—polished cast		Red End "	
				steel runners 1 24		STOPS, BENCH.	
				Children's Extension Bob.. 55		No. 10 Morrill pat-	
				Half-key Clamp Rocker—		tern .....per doz. \$11 00	
				Women's and Girls' 1 15		No. 11 Stearns pat-	
				Half-key Clamp Hockey—		tern 10 00	
				Women's and Girls' 1 51		No. 15 Smith pattern " 7 00	
				Racers, aluminum finish,		STOPPERS, FLUE.	
				including shoes 9 00		Common .....per doz. \$1 10	
				Hockey, aluminum 9 00		Gem, flat, No. 3... " 1 00	
				Both same prices for men's and women's.		Gem, No. 1..... " 1 10	
				Roller.		STRAPS.	
				Ball Bearing—Boys' 2 25		Skate .....per doz. 35c&1 20	
				Ball Bearing—Girls' 2 45			

STRETCHERS.

Carpet.	
Bullard's	per doz. \$3 90
Excelsior	" 5 25
Malleable Iron....	" 70
Perfection	" 6 30
King	" 4 50

Wire.

O. S. Elwood, No. 1 per doz. Nets	
O. S. Elwood, No. 2	

SWIVELS.

Malleable Iron	per lb. \$0 10
Wrought Steel	per gro. 4 50

TACKS.

Bill Posters' 6-oz., 25-lb. boxes.	
per lb.	15c
Upholsters' 6-oz., 25-lb. boxes, per lb.	15½c

TAPES, MEASURING.

Asses' Skin	List&40%
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THERMOMETERS.

Tin Case.....	per doz. 80c&\$ 1 25
Wood Back....	" \$2 00& 12 00
Glass.....	" 12 00

TIES.

Bale.	
Single Loop, carload lots	75&7%
Single Loop, less than car lots	70&15%

TOOLS, SAW.

Disston's Universal.....	10%
--------------------------	-----

TRAPS.

Game with Chains.	Per doz.
Victor No. 1.....	\$2 01
Oneida Jump No. 1.....	2 75
Newhouse No. 1.....	5 62

Mouse and Rat.

List per gross.	
Sure Catch Mouse Traps..	\$ 3 70
Vim Mouse Traps.....	3 70
Short Stop Mouse Traps..	3 20
Wood Choker Mouse Traps, 4 hole.....	17 00
Sure Catch Rat Traps.....	16 00
Vim Rat Traps.....	16 00
Short Stop Rat Trap.....	15 00
Dead Easy Rat Traps.....	17 00
Star Rat Traps.....	60 00
Erie	54 00
Packed in One Bushel Band Stave Baskets.	

List per bushel.

Sure Catch Mouse Traps (360 Traps)	\$ 9 30
Short Stop Mouse Traps (360 Traps)	8 00
Sure Catch Rat Traps (54 Traps)	6 00
Short Stop Rat Traps (54 Traps)	5 60

Assorted Mouse and Rat Traps.

List per bushel.	
Sure Catch (216 Mouse Traps and 26 Rat Traps) \$8 50	
Short Stop (216 Mouse Traps and 26 Rat Traps) 7 50	

TROWELS.

Cement.	
Atkins No. 6.....	19 50
" No. 9.....	25 50
Disston's	30%

TRUCKS.

Bag	each \$3 75
Warehouse or store,	
No. 1, each	\$24 50
No. 2, "	22 50

TUBS, WASH.

Standard, Wood.	Ex.
Nos. 3 2 1 large	
Per doz. \$9 50 11 25 12 75 15 50	

Galvanized.	
No. 1 2 3	
Per doz. ....13 75 15 95 18 60	

TWINE.

White Cotton.	
Eureka, 4-ply.....	per lb. 30c
Jute.	
3-ply and 6-ply Bale Lots.22½c	

VALLEY.

Formed Valley Galvanized Steel	60-5%
Milcor	Net

VISES.

No. 700, Hand.	
Inches 4½ 5 5½	
Doz. ....\$11 15 13 00 14 85	
No. 701, In. 4 5 6	
Doz. ....\$11 15 13 00 16 70	
No. 1, Genuine Wentworth, Noiseless Saw.....	per doz. 15 00
No. 2, Genuine Wentworth, Noiseless Saw.....	per doz. 22 50
No. 3, Genuine Wentworth, Noiseless Saw.....	per doz. 20 00
No. 500, All Steel Folding Saw	per doz. 16 00

WASHERS.

Standard O. G. cast iron, per lb.	3½c
Wrought steel in 5-lb. boxes, per lb.:	
In. 3/16 ¼ 5/16 ¾ 1	
15c 14c 13c 11c 10c	
¾ ¾ ¾ ¾ ¾	
9½c 9c 8c 8c	

WEDGES.

Ax.	per doz. Nets
Galling	per lb. Nets
Saw	per lb. 8½

WEANERS.

Fuller's, per doz. \$2 00 to \$ 2 50	
Tyler's Safety, per doz.	1 85 to 2 40
Carroll's, per doz. 3 00 to 3 75	
Hoosier, per doz. 3 50 to 4 60	
Shaw Perfected.. 3 00 to 3 75	

WEIGHTS.

Hitching	per lb. Nets
Sash—f. o. b. Chicago.	
Ton lots, per ton.....	\$42 50
Smaller lots, per ton.....	45 00

WHEEL BARROWS.

Common Wood Tray.....	\$3 00
Steel Tray	4 50
Angle leg. garden.....	5 75

WHEELS.

Carborundum	50%
Emery	60%
Well, Ins..... 8 10 12	
Per doz.....\$5 50 7 25 8 50	
12-in. heavy holisting, per doz.....	\$25 00

WIRE.

Black Annealed No. 3, per 100 lbs.	\$3 25
Galvanized barb wire, per 100 lbs.	4 15
Wire cloth—black painted, 12-mesh, per 100 sq. ft.	2 50
Cattle Wire—galvanized catch weight spool, per 100 lbs.	4 15
Galvanized Hog wire, 80 rod spool, per spool.....	3 60
Galvanized plain wire, per 100 lbs.	3 75

WOOD FACES.

50% off list.

WRENCHES.

Coe's Steel Handle, 6-inch.....	30%
" " " 8- "	30%
" " " 10- "	30%
" " " 12- "	30%
Coe's Knife-Handle, 6- "	30%
" " " 8- "	30%
" " " 10- "	30%
" " " 12- "	30%
Coe's All Patterns.....	30%
Bemis & Call's:	
Adjustable S, 10% Adjustable S Pipe, 10%; Briggs' pattern	30%
Combination Bright	25%
Steel Handle Nut.....	30%
Combination Black	25&5%
Merrick Pattern	30%

Knife Handle Pattern.

No. 62, Screw Wrench, List plus	30%
No. 60, Steel Handle.....	30%

WRINGERS.

No. 790, Guarantee, per doz. \$60 00	
No. 770, Bicycle	55 00
No. 670, Domestic	51 00
No. 110, Brighton	45 00
No. 750, Guarantee.....	60 00
No. 740, Bicycle	55 00
No. 22, Pioneer	42 50
No. 2, Superb	30 00

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